The Palmateer

Volume 21, Number 3 *Central Florida Palm & Cycad Society* *September, 2001*

Trunk of Dypsis lastelliana *in Queensland. See "The Lost Boys—Part 2" on p. 6. Photo by Daryl O'Connor*

Here is a palm rarely seen in Central Florida and, then, usually struggling: Brahea armata, *growing on Grant Ave., Satellite Beach, on the property of someone who doesn't belong to CFPACS. The palm's tilt was caused by Hurricane Irene in 1999. Photo by Greg Palm*

PALM FEST 2001

The Palm and Cycad Societies of Florida is proud to announce the 2nd annual Palm Fest, this year hosted by the Central Florida chapter. It is a scheduled two day event in the Tampa / St. Petersburg area. Included will be visits to several private & public gardens, a banquet dinner, a presentation on Palms of the Amazon by Dr. Andrew Henderson, a giant palm & cycad auction and who knows what other oddities may occur. Those on-line can see a detailed itinerary as well as a place to download a flyer and register for this exciting weekend of plant debauchery at the following link: http://www.plantapalm.com/palmfest2001.htm Or go to our chapter's website, www.cfpacs.com, and click on the Palm Fest link.

❖ Palm Fest brings together all members from all the individual palm and cycad societies to

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Deadline for December issue of *The Palmateer* is November 5th!

Old fools are worse than young ones.

—La Rochefoucauld, Maxim 444

Directions for Garden Visiting

For Saturday, September 29

From hotel (Holiday Inn/Downtown, St. Petersburg) to **Dr. Young's**, 505 Royal Palm Way, Tampa 33609. Go west on 3rd Ave., N., and turn right (north) on 3rd St., N. Turn left on 5th Ave., N., and proceed onto I-375 West. Once on I-375, follow signs for I-275 North to Tampa. Follow signs for Tampa over the Howard Frankland Bridge. After the bridge, take the first Tampa exit, which is Kennedy Blvd. Proceed east on Kennedy and turn right (south)onto Westshore Blvd. Follow Westshore south and turn left (east) at Swann Ave. (No light) Once on Swann Ave., Dr. Young's home will be the last house on the left, as Swann Ave. intersects with Swann Circle. (Look for the enormous *Borassus aethiopum*) Please park around the circle.

From Dr. Young's to **Ted Langley's**, 17204 Gunlock Rd., Lutz 33558. Return to Westshore Blvd. and turn right (north). Next, turn left at Kennedy Blvd., and follow signs for SR 60 West to Veterans Expressway/ Tampa International Airport/Clearwater. Follow the signs for "SR 589 Toll North to Air Cargo/Veterans Expwy." Follow SR 589 through the required tolls for about 15 miles and proceed to the Dale Mabry Hwy. Exit. Turn left (north) onto Dale Mabry Hwy until Land O'Lakes Blvd. (US#41). Bear left on Land O'Lakes Blvd. And follow until SR 54. Turn left (west) at SR 54 and proceed 4 miles to Meadowbrook Dr. Turn left onto Meadowbrook and go south to Bridlepath Ct. Turn left onto Bridlepath and go east to Deerfield Dr. Turn right onto Deerfield and go south to Gunlock Rd. Turn right at Gunlock and proceed to 17205, where the palms are!

For Sunday, September 30

From hotel to **Phil Stager's**, 4184 51st Ave., South, St. Petersburg 33711. Proceed to I-375. Once on I-375, follow signs for I-275 south to Bradenton. Follow I-275 South to the 54th Ave., S. exit. At the light, turn right (west) and go under the overpass. Proceed west on 54th Ave. and turn right (north) at 41st St. Once on 41st St., go noth to 51st Ave., S., and turn left. The palms are at 4184 51st Ave., S.

From Phil Stager's to **Gizella Kopsick Palm Arboretum**, located at the corner ofN. Shore Dr., N. E. and 10th Ave., N.E. Proceed back to I-275 and head North (towards Tampa) Take exit 10 (I-375 East-"The Pier") and follow I-375 to the end at 4th Ave., N. Follow 4th Ave. east to Beach Dr., and turn left (north), passing the landmark pink Vinyl Hotel on the right. From Beach Dr., turn right at 7th Ave., N. E., and follow to N. Shore Dr. the palms will be visible on the right.

Directions Confusing?

If so, you have lots of company. Another aid to find your way about at Palm Fest is to print out one or more of the detailed maps from our website, www.cfpacs.com

You've guessed (of course) what this palm is. Now, where have you seen it? Answer: Allagoptera arenaria *(perhaps the Editor's favorite palm), at Gordon and Pat Smith's place in Maitland—tied up so it doesn't flop over.*

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PALM FEST 2001

gether to renew friendships, make new ones, talk about their interests in palms and cycads, and just have fun. This event will be held every year and hosted on a revolving basis by one of the Florida palm and/or cycad societies.

- Our keynote speaker, Dr. Andrew Henderson is a well-known author and researcher. Among his work is *Field Guide to the Palms of the Americas*. He conducts guided tours through the Amazon region and his presentation will center on its numerous endemic palm species.

There is a registration fee of $60 per person, payable at the door or in advance by August 31st. The fee covers munchies at the Social hour, the banquet, and a boxed lunch on Sunday. Make all checks payable to PACSOF. Send to:

PACSOF Palm Fest 2001
c/o David Witt
7026 Burnway Dr.
Orlando, Fl. 32819-5055

If anyone has any questions you can email me at dwitt3@cfl.rr.com or call (407) 352-4115. Please feel free to bring a palm or cycad for the auction. I look forward to seeing many of you there,

Dave Witt
PACSOF Prez

PRESIDENT'S MESSAGE

As I write this we are right smack in the middle of our "growing season", a seemingly endless string of 90f days and 70f nights that our palms and cycads enjoy so much. For most of us the recent drought conditions have subsided, enough that we no longer have to resort to sneaking out at night with a water hose in tow, innocently standing with our hands clasped behind our back as our various neighbors drive or walk by … but enough about me. The big news this time around is the 2nd annual Palm Fest, an event our chapter is hosting the last weekend of September in Tampa/St.Pete. I hope as many of you as possible will attend this wonderful event. I have been out bragging about how enthusiastic our local chapter is and a huge turnout from our region will be the best way to support my boasting. I was at last year's in West Palm Beach and I cannot express how much I enjoyed the weekend, not so much viewing the various gardens but being able to meet, sit down and talk with many other palm-nuts in a relaxed, loose-knit atmosphere. I can assure you it will be $60 well spent. And for those are new to the chapter, Palm Fest is the perfect opportunity to view a great many mature plants in several remarkable settings, as well as meet some of the most experienced and learned palm growers in the entire state.

I hope everyone is enjoying the color photos in our newsletter; it is a nice reward from the success of our chapter's seed bank. A great thanks goes out to all who have continued to donate and purchase seeds. It's a terrific way to support your local chapter. For those of you who are not on-line in this computerized age, you are missing out on one of the most heavily visited and talked about gardening websites on the Internet. Our chapter's website, www.cfpacs.com, is getting better and better with more information and color pictures than ever before. Again this is only possible due to the support and contributions of our local members – you! Keep up the great work everyone; I look forward to seeing you at Palm Fest.

—Dave Witt
CFPACS prez

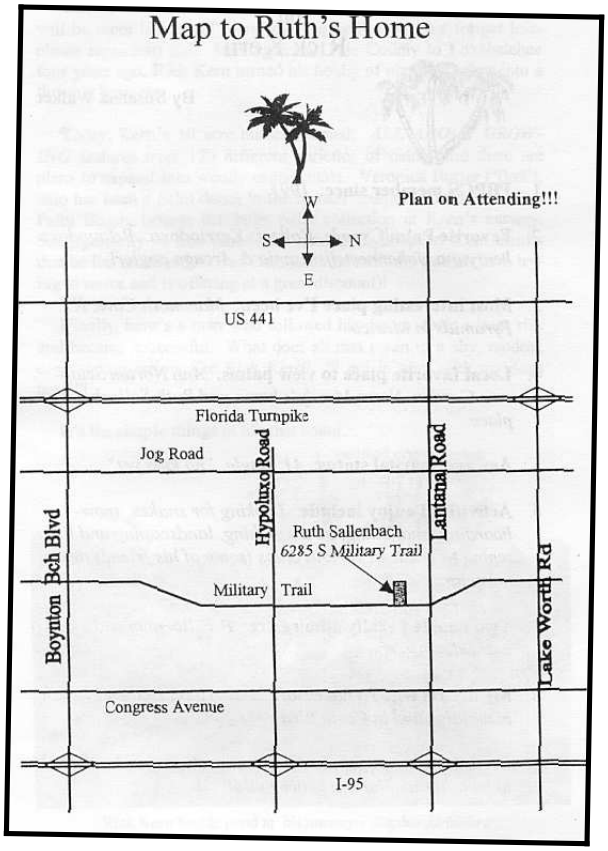
Injuries done to us by others are often less painful than those we inflict on ourselves.
—LaRochefoucauld, Maxim 363

Impressive Trithrinax brasiliensis *at Merrill Wilcox's house in Gainesville, with Faith Bishock for scale. What <u>are</u> you doing, Faith?*

¡ATENCIÓN!

Plan on celebrating the holidays "beach style" at Mark and Diana Grabowski's wind/salt tolerance proving grounds located in Cocoa Beach on the ocean. The palm social will be held on Saturday, December 15th from 11 am-2 pm. Informal tour of property, lunch, and plant sale. Bring a covered dish, swimsuit, fishing poles, surfboards, and lawn chair. A variety of seafood entrees, veggies, key lime pie, and beverages will be provided.

Look for map and detailed directions in the December issue of *The Palmateer*.



Deadline for material for the December issue of *The Palmateer* is November 5!!!

At left, the plaque placed at Kanapaha Botanical Garden, Gainesville, during the March meeting, honoring Gilbert Nabonnand, French hybridizer.

Palm Beach Palm & Cycad Society's Annual Picnic, Auction

Who? This picnic and sale is open to all IPS members, all PBPCS members and our neighboring palm society friends.
When? Saturday, September 8, 2001. Starting at 9:30 a.m.
Where? Ruth Sallenbach's home and magnificent 5-acre garden full of rare palms and cycads. 6285 S. Military Trail, Lake Worth, FL 33463. (561) 965-5430
What to bring? 3 things: a covered dish of your choice, any kind of plant you can donate, and a lawn chair.

You'll be in good company with this group of palm nuts! After a delicious meal you can enjoy walking the grounds of Ruth's garden on your own or take an informal tour of the property. The fun-filled day will have **door prizes, giveaways, a raffle**, and **silent auction.** The auction will feature palms and cycads for the most part; however, what ever our members choose to bring will also be auctioned off! (This might be a good time to thin out your bromeliads or orchids.) All proceeds will go to the PBPCS treasury and be used for funding palm/cycad research, educational seminars, donations of palms to public gardens, and newsletter costs, etc.

(The info above is taken directly from the Palm Beach chapter's August, 2001, bulletin, The Palm & Cycad Times. *Ruth Sallenbach's property is on the west side of Military Trail, no more than 500 feet south of Lantana Road. Don Bittel is the current president of the Palm Beach Palm & Cycad Society. His phone number is (561) 221-0943, which is in Palm City, Martin County. His e-mail address is* dbittel@treco.net *For a rave account of this garden, see "From the Editor's Desk" on page 34.)*

The Lost Boys—Part 2

(Wherein is continued the Adventures of The Lost Boys— *Mark Wuschke, Mike Dahme, Bruce Barry, and the author— trailing behind, or near, or somewhere about the post-Biennial tour of Queensland in their trusty LandCruiser, well-stocked with liquid refreshment. Reprinted here by permission of the author and of the editor of the Palm and Cycad Societies of Australia, Southern Queensland Group newsletter.)*

By Daryl O'Connor

Cape Tribulation to Princess Charlotte Bay via Cooktown, Laura and Lakefield NP

Day 1 – Cape Tribulation to Cooktown

After leaving the IPS tourists to their hamburger lunch, we teamed up with keen plant collector and palm nut, Bruce Barry, a resident of Vista, California. Bruce was on a 10 week tour of the east coast, starting with the IPS tour and working his way down to Sydney.

We packed up the Esky, filled up the tank and headed north into the unknown (well, unknown to us at least!). The road turned to dirt just before Cape Tribulation, and followed the coastline as a dusty rocky rutted track (the infamous Bloomfield Track), made worse by the frequent traffic of mainly four wheel drives, along with the occasional truck or two. Along this stretch of road were many wonderfully scenic areas, with pockets of rainforest lining both sides of the road, and views of the turquoise ocean visible through the few openings in the forest. The road was steep in sections as the area was quite hilly and progress was steady at best, giving us all time to admire the scenery. There were several species of palms growing along the roadside, *Calamus* being the most common, although there were large stands of *Licuala ramsayii*, along with scattered populations of *Normanbya normanbyi* and *Archontophoenix alexandrae*. *Ptychosperma elegans* was also common in some areas. Each sighting brought the vehicle to a dusty halt, whilst the palm crazies inside looked for other palm species and took countless photos of these commonly cultivated palms growing in habitat. Bruce would wander off into the bush and we would spend the next 20 minutes trying to herd him back to the car. This was the start of a trend…

Further north the lushness of the lowland rainforest left us, and the vegetation reflected the seasonal dryness this region receives. There were occasional pockets of *Archontophoenix*, *Normanbya* and *Ptychosperma* along creeks and rivers, but large areas of dry Eucalypt forest separated these for many kilometres. There were stands of *Livistona muelleri* growing here, preferring the seasonally dry weather. Just north of the town of Ayton we turned left and headed west for several kilometres to visit a long lost friend of Mike's. Here we were, a couple of hours north of Cape Tribulation, driving down a dusty road in the middle of nowhere, and staring us in the face was a property covered in exotic palms! These ranged from *Roystonea*, *Dypsis* (many species) *Caryota*, *Elaeis*, to *Wodyetia* and *Normanbya*. A little oasis set in the middle of the bush! As it turned out, it was a neighbour who apparently has a great interest in palms and had joined the local Palm and Cycad Society in Cairns. Mike's friend had several hectares of land, also with several palm species planted. Mainly commonly cultivated species such as *Dypsis decaryi* and *Wodyetia bifurcata*, although a large *Arenga pinnata* was impressive. Local lore had it that there was a different form of *Archontophoenix* growing on the tops of the nearby mountains. We could not gather whether this was a northern stand of *A.purpurea* or another variety of *A.alexandrae*. One day somebody will investigate and we'll have an answer!

The boomtown died, the railroad tracks got torn up, leaving this relict behind. Might it have a bar?

After a quick cuppa and a chat we once again headed north to our evening destination – Cooktown. We crossed several creeks and then a decent sized river – the Bloomfield River before finally hitting sealed road again just south of Cooktown. An impressive landmark was Black Mountain, a large hill totally devoid of any vegetation and looking like a pile of black rocks. As we

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The Lost Boys—Part 2

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drove closer, we could clearly see that it was comprised entirely of granite boulders covered in black lichen, which gives it a spectacular, sinister appearance.

We drove into Cooktown just on sunset, catching the evening breeze off the water and stopping to admire the views across the harbour. Our last chance at civilisation and time to go to the last ATM to cash up, fuel money being critical up there!

Day 2 – Cooktown to Laura

An early start to the day and we headed straight to the local botanical gardens, resurrected and restored to perfection in the '80s and with a history of over 100 years. There were quite a few palms species represented, most were clearly labeled, and the gardens were well maintained. Most of the palms growing there were commonly cultivated species, although there were several *Livistona* species that weren't labeled. After approximately 30 minutes we had seen all there was to be seen, so headed to our next destination…Barrett's Creek.

Driving down the sealed road to Cooktown airport, we then turned right up Barrett's Creek road, a dusty track that leads to who knows where! A couple of kilometres down the road and there they were - a stand of *Livistona sp* 'Cooktown'! According to some, these are *Livistona drudei*, but a lot of people would argue this fact. There were quite a few large individuals, and many smaller plants growing in this area. The palms were growing in low swampy ground, which although dry at the time, would have been very wet and boggy during the wet season. The palms themselves were quite stately, and certainly are an attractive species that would be great in cultivation. Also growing in the same area were *Livistona muelleri*, which are distinctly different. We were just about to leave, when we realised that Bruce was missing. Where did he go? We listened very carefully, and could clearly hear crocodiles in the nearby mangroves. After calling him for a few minutes, he finally appeared out of the mangroves about 300 metres down the road. He had become engrossed in the native plant life and had wandered off, losing all track of time and direction…luckily the crocs weren't hungry that day!

We continued on, heading northwest to Laura and the Lakefield National park, in search of more *Livistona spp* and *Corypha utan*. Half an hour out of Cooktown we crossed the Normanby river, and right in front of us was a stand of the most massive palms! This was the

One of the hazards faced by The Lost Boys *in darkest Queensland: the formidable stems of* Calamus moti. *Below, the vehicle (right), two* Lost Boys*: Mark Wuschke—that's bottled water—and Mike Dahme, with no visible beverage.*

first of many encounters with one of the giants of the palm world – *Corypha utan*. We stopped to take photos, and only when standing underneath these monsters did we actually comprehend the sheer dimensions of these palms. Although growing under typical bush conditions, they were far more massive than the plantings in Cairns. They are certainly tough adaptable plants. There were some large scattered individuals, as well as a stand of younger plants growing along a dry creekbed. Nothing prepares you for the size of these beauties!

Back in the Toyota again, and on to Laura to grab some accommodation and a nice meal. For the remainder of the trip to Laura we saw perhaps three or four *Corypha*, and not one other palm anywhere, the landscape becoming drier and less palm friendly by the kilometre. We finally arrived at Laura, and settled in to the Quinkan Hotel, better known as the Laura Pub. There wasn't too much action in town, so after walking the length of the main street twice, we settled down for the night, eager to head into the National

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Cold Damage to Palms at Harry P. Leu Gardens Orlando, Florida May 2001

By Eric Schmidt

Here is a summary on how the palms at Harry P. Leu Gardens fared following the Winter of 2000-2001. We are located in USDA Zone 9B. The following temperatures were the lowest recorded during the winter. The temperatures themselves were not abnormally cold but the number of nights below 40F. and days below 55F. were. We had 3 nights below freezing (32F.)
The night of 1/4/01 was the only night in which frost formed.
12/19- 27F.
12/30- 28F.
12/31- 31F.
1/4 - 34F.
1/6 - 33F.
1/9 - 33F.
1/20- 33F.

There were over a dozen nights where temperatures fell between 35F. and 40F. The prolonged coolness did more damage than the actual low temperatures. Our large *Cocos nucifera* 'Green Malayan' did not show major damage after the freezing temps but began to decline in February and croaked in March. It previously had survived a low of 26F. in February, 1996, but could not handle the prolonged cool temperatures. It even set fruit here in previous years, but these never matured as squirrels made off with them when they reached golf ball size.

The number in parentheses is the height of the palm in feet. None of the palms were protected at any time.

Acoelorrhaphe wrightii (6') no damage
Acrocomia aculeata (25', 30') no damage
A. totai (8') no damage
Actinorhytis calapparia (3') killed
Adonidia merrillii (5') killed
Aiphanes acanthophylla (5') defoliated but recovering
A. caryotifolia (5' defoliated but recovering, 6' moderate burn)
A. lindeniana (3') defoliated but recovering
A. sp. (5') defoliated but recovering
Allagoptera arenaria (4') no damage
Archontophoenix alexandrae (5') no damage
A. cunninghamiana (10') no damage
A. cunninghamiana "Illawarra" (8') no damage
A. maxima (5') no damage
A. purpurea (5') defoliated but recovering
A. tuckeri (2 @ 4') no damage
A. sp. (10') no damage
Areca catechu (4') minor burn
A. triandra (6') slight burn
A. vestaria (3') moderate burn
Arenga australasica (4') no damage
A. brevipes (4') killed to ground, sucker regroing
A. caudata (4') very minor burn
A. caudata var. stenophylla (3') no damage
A. engleri (Ryukyu Island form) (3 @ 5') no damage
A. engleri (Taiwan form) (3 @ 10') no damage
A. hookeriana (divided leaf form) (3') no damage
A. hookeriana (solid leaf form) (1.5') no damage
A. microcarpa (3') no damage
A. obtusifolia (4') moderate damage
A. pinnata (5' minor damage, 8' severe burn but recovering, 30 severe burn)
A. porphyrocarpa (3') severe burn, recovering
A. tremula (5') moderate damage
A. undulatifolia (2') moderate burn
Astrocaryum mexicanum (4') moderate damage
Attalea butryacea (3') minor damage
A. cohune (4') minor damage
A. rostrata (15') minor damage
A. sp. (7') minor damage
Bactris gasipaes (10') stems froze to the ground, suckers regrowing
B. mexicana (4') no damage
B. setosa (3') no damage
Beccariophoenix madagascariensis (4') minor damage
Bismarckia nobilis (blue form) (20') no damage
B. nobilis (green form) (3') slight burn
Borassodendron machodonis (3') minor burn
Borassus aethiopum (3') minor damage
Brahea armata (3') no damage
B. brandeegei (3') no damage
B. clara (5') no damage
B. dulcis (3') no damage
Burretiokentia hapala (4') defoliated but recovering
Butia bonnetti (3') no damage
B. capitata (5', 7') no damage
B. capitata var. nehrlingiana (15') no damage
B. eriospathe (3') no damage
B. yatay (5') no damage
X Butiagrus everettii (3') no damage
X Butiagrus nabonnandii (10', 15', 25') no damage
X Butia capitata x Jubaea chilensis (3') no damage
Calamus caryotoides (5') no damage
C. erectus (3', 4') no damage
C. inermis (3') no damage
C. usitatus (10') very slight burn
Calyptonoma rivalis (3') killed

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Cold Damage at Leu/Orlando

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Carpentaria acuminata (4') severe burn, recovering
Carpoxylon macrosperma- major burn but recovering
Caryota cumingii (6') defoliated but recovering
C. gigas (20') minor damage
C. maxima (5') defoliated but recovering
C. mitis (15', 20', 25') major damage but recovering
C. no (8') minor burn
C. obtusa (10') no damage
C. ochlandra (20') no damage
C. philippinensis (8') defoliated but recovering
C. rumphiana (5') severe damage but recovering
C. urens (10') moderate damage
C. urens (clustering form) (7') moderate damage
C. mitis x rumphiana (severe damage but recovering
C. mitis x urens (5') defoliated but recovering
C. sp. "Elvis" moderate burn
C. sp. "Himalayana" (5') no damage
C. sp. "Laosenesis" (3') no damage
Chamaerops humilis (6', 7', 7') no damage
Chamaedorea alternans (3') no damage
C. brachypoda (3') no damage
C. carchensis (3') no damage
C. cataractum (3') no damage
C. elatior (6') no damage
C. ernesti- augustii (4') no damage
C. erumpens (4') no damage
C. fragrans (3') no damage
C. glaucifolia (4') no damage
C. hooperiana (5') no damage
C. klotzschiana (5') no damage
C. metallica (3') no damage
C. *microspadix* (15 @ 5'-8') no damage
C. oblongata (5') no damage
C. plumosa (3 @ 5') no damage
C. radicalis (3') no damage
C. satorii (4') no damage
C. schiediana (3') no damage
C. seifrizii (4') no damage
C. seifrizii "Fairchild Dwarf" (1') no damage
C. stolonifera (4') no damage
C. tenella (1') no damage
C. tepejilote (solitaire form) (4') minor damage
C. sp. (3') no damage
C. klotzschiana x glaucifolia (5') no damage
C. pochutlensis x hooperiana 'Jane Ann' (5') no damage
Chambeyronia hookeri (4') moderate damage
C. macrocarpa (4') moderate damage
Chelyocarpus chuco (3', 3') one was defoliated, the other only had minor burn
Chuniophoenix hainanensis (3', 4') no damage
Clinostigma savoryanum (2') defoliated but recovering
Coccothrinax alta (4') no damage
C. argentata (3') no damage
C. barbadensis (6') severe burn but recovering
C. crinita (1', 1', 3') no damage
C. miraguama (4') no damage
C. miraguama var. havensis (2') no damage
C. readii (3') no damage
C. spissa (2') no damage
C. sp. (*argentata*?) (3') no damage
C. sp. (*barbadensis*?) (4') defoliated but recovering
C. sp. (6') no damage
C. crinita x C. sp. (5') no damage
Cocos nucifera 'Green Malayan' (5', 12') killed
C. nucifera 'Maypan' (5') killed
C. nucifera 'Red Malayan' (4') killed
Colpothrinax cookii (2') minor damage
Copernicia alba (4', 6') no damage
C. baileyana (6') minor burn
C. curbeloi (2') no damage
C. fallaense (4') slight burn
C. gigas (2') slight burn
C. glabrescens var. glabrescens (5') no damage
C. hospita (4') slight burn
C. macroglossa (1.5') no damage
C. prunifera (5') no damage
C. x sueroana (2') no damage
C. x vespertilianum (2') no damage
Corypha utan (3') defoliated but recovering
Cryosophila albida (3') minor damage
C. argentea (3') defoliated but recovering
C. warscewiczii (6') moderate damage
Cyphophoenix elegans (3') no damage
C. nucele (4') defoliated but recovering
Desmoncus orthacanthos (5') stems froze to ground, suckers regrowing
Dictyosperma album (5') severely damaged but recovering
D. album var. conjugatum (3') defoliated but recovering
D. album var. rubrum (4') defoliated but recovering
Dypsis ambositrae (3') defoliated but recovering
D. ankaizinensis (2') no damage
D. basilongus (3') no damage
D. baronii (5') no damage
D. cabadae (4') no damage
D. cerceus (5') killed
D. coursii (1.5') no damage
D. crinita (2') killed
D. decaryi (5') only minor burn but center pulled out, has not yet began to
recover
D. decaryi (white form) (4') minor burn
D. decipiens (2') no damage
D. lastelliana (3') no damage
D. leptocheilos (7') minor damage

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Cold Damage at Leu/Orlando

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D. lutescens (7') moderate damage
D. madagascariensis (3') no damage, (8') moderate damage
D. madagascariensis "Mahajanga" (7') very minor burn
D. onilahensis (2') no damage
D. pinnatifrons (2') minor damage
D. psammophila (3') no damage
D. tsaratananensis (3') slight burn
D. sp. "Honkona" (3') severe burn, recovering
Elaeis guineensis (10') foliage only had moderate burn but center collapsed in April. Rotted portion sawed out and it is now recovering
Elaeis oleifera (3') minor damage
Euterpe edulis (4') moderate damage
Gastrococos crispa (3') no damage
Gaussia maya (5', 8') defoliated but recovering
Geonoma schottiana (3') no damage
Guihaia argyrata (4@ 3') no damage
Howea forsteriana (5') minor burn
Hyophorbe indica (3') moderate burn, (4') defoliated but recovering
H. lagenicaulis (3', 5') defoliated but recovering
H. verschaffeltii (5') defoliated but recovering
Hyphaene dichotoma (1') no damage
H. schatan (4') minor burn
H. thebaica (1') no damage
H. turbinata (4') minor burn
Itaya amicorum (2') killed
Johannesteijsmannia magnifica (1.5') no damage
Jubaea chilensis (7') no damage
Kentiopsis oliviformis (3') defoliated but recovering
Kerridoxa elegans (3') slight burn, (4') defoliated but recovering
Laccospadix australasica (3 @ 2') no damage
Latania loddigesii (4') moderate damage
L. lontaroides (5') moderate damage
L. verschaffeltii (3') moderate damage
Licuala grandis (4') killed
L. lauterbachii (2') no damage
L. lauterbachii var. bougainvillensis (2') killed
L. orbicularis (2') killed
L. peltata var. peltata (3') no damage
L. peltata var. sumawongii (3') no damage
L. ramsayi (3') slight burn
L. rumphii (2') killed
L. spinosa (3') no damage
L. sp. "Thai Dwarf" (2') killed
Livistona australis (3') no damage
L. benthamii (2') no damage
L. carinensis (3') moderate damage
L. chinensis (3' ?50') no damage
L. decipiens (20') no damage
L. drudei (7') no damage
L. fulva (3') no damage
L. jenkinsiana (3') no damage
L. loriphylla (1') no damage
L. mariae (5') no damage
L. muelleri (3') no damage
L. nitida (3') no damage
L. rigida (5') no damage
L. robinsoniana (3') no damage
L. rotundifolia (6') moderate damage
L. saribus (green petiole form) (6') no damage
L. saribus (red petiole form) (3@ 5') no damage
Lytocaryum weddellianum (3 @ 4') no damage but centers rotted, trunks cut and now recovering
Marojejya darianii (1') minor damage
Nannorhops ritchiana (3@ 1'-2') no damage
Nenga pumila var. pachystachya (3') killed
Normanbya normanbyi (7') severe damage but recovering
Phoenix acaulis (2') no damage
P. canariensis (3', 10', 20') no damage
P. dactylifera 'Medjool' (25') no damage
P. farinifera (4') no damage
P. hanceana (3') no damage
P. hanceana "Formosana" (3') no damage
P. loureirii (3') no damage
P. pusilla (3') moderate burn
P. reclinata (pure species) (5') moderate burn
P. roebelenii (5') no damage
P. roebelenii (clustering form) (3') no damage
P. rupicola (4') no damage, (7') no damage
P. sylvestris (3', 30') no damage
P. taiwaniana (3') no damage
P. theophrastii (3') no damage
P. reclinata x dactylifera (10') no damage
P. roebelenii x reclinata (5') no damage
P. sp. "Tunis" (4') no damage
Pinanga coronata (6') stems killed to the ground, suckers recovering
P. kuhlii (5') stems killed to the ground, suckers recovering
P. speciosa (3') killed
Plectocomia himalayana (4') no damage
Polyandrococos caudescens (2@ 3') no damage
Pritchardia beccariana (3') no damage
P. hillebrandii (green form) (4') only minor damage but new leaves emerging stunted
P. remota (2') defoliated but erecovering
P. schattaueri (3') very minor damage
P. vuylskekeana (3') killed
Pseudophoenix sargentii var. sargentii (3', 4') no damage
Ptychococcus lepidotus (4') killed

(Continued on page 11)

Cold Damage at Leu/Orlando

(Continued from page 10)

Ptychosperma macarthurii (5') stems killed to the ground, suckers recovering
Ravenea glauca (3') no damage
R. madagascariensis (7') no damage
R. rivularis (6', 20') no damage
R. robustior (3') no damage
R. sambiranensis (3') no damage
R. xerophila (2', 2') no damage
Rhapidophyllum hystrix (many from 2'-6') no damage
Rhapis excelsa (6') no damage
Rhapis excelsa "Roundleaf" (4') no damage
R. humilis (6'-12') no damage
R. laoensis (3') no damage
R. multifida (5') no damage
R. subtilis (4') no damage
Rhopalostylis cheesmanii (3') no damage
R. sapida (1.5') no damage
Roystonea borinquena (12') defoliated but recovering
R. elata (8') severely damaged but recovering
R. princeps (7') defoliated but recovering
R. regia (9') defoliated but recovering
Sabal bermudana (6') no damage
S. blackburniana (6') no damage
S. causiarum (7', 35') no damage
S. domingensis (8') no damage
S. etonia (3') no damage
S. guatemalensis (8') no damage
S. maritima (4') no damage
S. mauritiiformis (6', 8') no damage
S. mexicana (5') no damage
S. miamiensis (2') no damage
S. minor (5 @ 3'-4') no damage
S. minor var. lousiana (1.5') no damage
S. palmetto (many up to 40') no damage
S. parviflora (5') no damage
S. rosei (3') no damage
S. uresana (6') no damage
S. yapa (3') no damage
S. sp. "Riverside" (4') no damage
S. sp. "Texensis" (1.5') no damage
Satakentia liukiuensis (4') killed
Schippia concolor (4', 4') very minor damage
Serenoa repens (green & silver forms, various heights) no damage
Syagrus amara (2') no damage, (6') moderate damage
S. botryophora (4') no damage
S. cearanensis (3') no damage
S. coronata (10') very minor damage
S. glaucescens (3') no damage
S. oleracea (4') no damage
S. orinocensis (3') no damage
S. picrophylla (7') no damage
S. pseudococos (2') no damage
S. quinquefaria (6') no damage
S. romanzoffiana (3-30') no damage
S. romanzoffiana "Santa Catarina"(30') no damage
S. sancona (5') moderate damage
S. schizophylla (4') no damage, (5') minor damage
S. stenopetala (3') no damage
S. sp. (oleracea?) (4') no damage
S. x costae (8') no damage
S. x montgomeriana (3') no damage
Synechanthus fibrosus (4') minor damage
Thrinax excelsa (3') no damage
T. morrisii (4', 4') no damage
T. parviflora (4') killed
T. parviflora ssp. parviflora (1') no damage
T. radiata (5') very minor damage
Trachycarpus fortunei (3', 5', 5', 6') no damage
T. latisectus (3 @ 3') no damage
T. martianaus (5 @ 2') no damage
T. nanus (1') no damage
T. oreophilus (2 @ 2') no damage
T. takil (3 @ 3') no damage
T. wagnerianus (2 @ 3') no damage
T. sp. "Takaghii" (4') no damage
Trithrinax acanthocoma (5') no damage
T. brasiliensis (5') no damage
T. campestris (2') no damage
Veitchia arecina (4') defoliated but recovering
Wallichia caryotoides (4') minor damage
W. densiflora (3') no damage
W. disticha (3', 4', 4', 8') no damage
Washingtonia filifera (3') no damage
W. robusta (3@ 25') no damage
Wodyetia bifurcata (6', 8') moderate damage
Zombia antillarum (4') no damage
Z. antillarum x Coccothrinax sp. (3') no damage

Other tropicals

Freycinetia cumingiana (5') killed
Pandanus amaryillifolius (4') killed
P. baptistii (5') killed
P. baptistii 'Aureus' (5') killed
P. odoratissimus (3') no damage
P. sanderi (6') killed
P. tectorius (4') no damage
P. utilis (4', 10') moderate damage
P. veitchii (5') killed

Cycad Tour of Mexico

By Ian Watt

(This article is reprinted from the Autumn, 2000, issue of Chamaerops*, the journal of the European Palm Society, with the permission of the editor, Martin Gibbons, and of the author.)*

The ten day cycad tour of Mexico was organized by Californian Jeff Chemnick, who has over twenty years of experience observing Mexican cycads in habitat. I met Jeff and the other three members of the group of the 29th of February in Veracruz. The aim was to observe fifteen species of cycad in habitat; to make comparisons between related species; and to look closely at habitats, aspects, populations, and recruitment. We were to head north along the coast, then inland through the mountains towards the Pacific, south into tropical forest, and then back towards Veracruz, thus completing the circle.

Transport was by air conditioned minibus. Accommodation was in modest hotels along the route. The distances between locations were sometimes great, and a good pace had to be maintained in order to cover the itinerary.

A few miles drive up the coast from Veracruz followed by a two mile hike along the seashore and through the high dunes got us to our first and possibly most unusual cycad locality: *Dioon edule*, growing in sand and soft sandstone about a third of a mile from the shore. The *Dioon*s had multiple trunks over a meter in length with a head of thirty or more leaves. Many were male with immature cones and some plants covered an area of five by five meters. The total area of cycads was less than one hectare grouped near the ridge. All were facing towards the sea and surrounded by thorn brush, *Bursera*, and an *Acrocomia*. The plants generally appeared to be in good health, considering the harsh location and poor soil, with the exception of one with leaf damage from insect activity. A couple of seedlings were found at the bottom of the slope.

We drove inland, stopping briefly at a site where *Zamia loddigesii* was once very common, before heading into the hills and the Palma Sola region. *Sabal* and *Tabebuia* trees were flowering in the lowlands alongside the fields of sugar cane, whilst higher up in the cooler air, oaks and pine dominated the countryside. *Dioon edule* was once abundant along the road out of Palma Sola, but with easy access and a demand from across the border, the plants were quickly depleted. The City's laws have helped curb the flow but have not stopped it. The few cycads we saw were growing along a dry and rocky stream bed surrounded by oak and grasses. Their trunks measured up to 1.5m and were charred black from clearing fires. Some had been cut down,

Zamia loddigesii*, one of the cycads seen by the travelers in Mexico. This plant, however, belongs to Tom Broome, who supplied all cycad pictures in this issue. Pictures from the original article were not available.*

and these were pushing out new growth from the base. No seed, seedlings or young plants were seen.

Further west, on a road cutting, a *Ceratozamia* had colonized the rock face. Known in the trade as *Ceratozamia* "Palma Sola," they are characterized by large, stiff, upright leaves with prominent spines. Seedling and mature plants were growing in fairly good numbers.

From the Palma Sola region we climbed to 1600m through steep valleys and round sheer rock outcrops clothed in pine and oak to see a relatively new discovery. *Ceratozamia morettii* is a medium sized cycad with leaves to 1.5m and grows in the cloud forest of the Sierra Madre facing the gulf. Described in 1998 with a population estimated at 300, this is a cycad that is difficult to observe. Its preferred habitat is sheer rocky walls with drops of 150m to the valley floor below. Average rainfall in this region is 2m. *Ceratozamia morettii* is high on the want lists of collectors; therefore, the location has not been published. Other plants growing in the vicinity were *Gunnera*, *Alnus*, *Clethra*, *Dendropanax*, *Ilex discolor*, *Liquidamber*, *Magnolia*, *Quercus laurina*, *xalapennsis* and *germana*.

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Cycas robusta*, labeled also "Santiago Tuxtla," presumably its place of origin. This individual lives in Polk County.*

The drive to the next locality was through more spectacular scenery, including views of Pico de Orizaba, otherwise known as Citlailepetl…. At 5610m above sea level, it is the highest peak in Mexico and third highest in North America. The last eruption was in 1566. *Ceratozamia mexicana* is an elegant, narrow leafed cycad. The location, El Esquilon, was a very steep wooded hill with *Chamaedorea* palms growing in the dense shade. The *Ceratozamia* were difficult to locate but a few were eventually found. A landslip had occurred recently and two large plants were found at the bottom of the slope. These were collected and later dropped off at the research institute.

The next stop was the Jardin Botanico and Institute of ecology in Xalapa, which provided an excellent opportunity to observe nearly all the Mexican cycads, some currently under investigation. We had a tour of the greenhouses and met Andrew Vovides, curator of research at the institute. Vovides, in conjunction with the local farmers, is involved in the development of cycad nurseries growing thousands of *Dioon edule* to generate income and reduce the threat on wild populations. The project was started about ten years ago near Chavarillo, the type locality for *Dioon edule*.

Along the Rio Pescardo we stopped to view *Dioon edule* clinging on the north-facing cliff walls, 50m above the road. With trunks up to 3m, it is estimated these slow growing cycads are at least 500 years old and may be 2 or 3 times that. The cycads were hanging on to the rock face in a very precarious manner. Views to the river and valley plain some 200m below were breathtaking. From the Rio Pescardo we headed south through the *Tillandsia* trail, made famous by the pre-CITES *Tillandsia* and Orchid collectors.

Another hour or so later we were at El Mirador looking for a variety of *Ceratozamia mexicana*. The El Mirado cycad differs by having much longer, arching leaves with broader leaflets, and very reduced spines on the petiole. Also, the cones are much longer. Some day it may be separated out as a subspecies. We found two beautiful examples growing on a ranch: a mature male with cone, growing at the top of a bank and the second on a high shelf in the owner's kitchen. It was a magnificent specimen with long trailing leaves. The owner of the ranch was very hospitable, handing out beers and showing us around his house and garden with great pride.

The next day we continued south on the auto route past Tehuacan in Puebla and towards the high desert. Pine and oak gradually gave way to xerophytes, initially through large stands of *Yucca elephantipes*, densely branched and up to 10m in height, and then through huge number of the cactus *Pachycereus weberi*, and massive trees with stout trunks and dense crowns. Further along, the dominant plant was *Neobuxbaumia*, a tall columnar cacti. Huge barrel cactus, *Dasylirion lucidum*, *serratifolium*, and two species of *Agave* were recorded, as well as numerous other Cactaceae. The unusual *Fouquieria purpusii* was only in one location, 4m in height and growing on a large rock. In the distance, growing at the foot of a cliff, was a large number of *Brahea*, which were the only palms in the area.

We left the high desert and drove into the hills towards Teotitlan Del Camino in Puebla. *Dioon califanoi* grows above the town of Teotitlan, at an elevation of 2000m. The road cuts through the colony with plants above and below in a narrow band. Many cycads must have been destroyed during its construction. Large areas of the hillsides in this region have been cleared for farming, and land too steep or rocky has sparse vegetation of thorn and oak. The cycads in this locality numbered fewer than 100, male and female, with semi mature cones and trunks up to 3m. There were few seedlings and no young plants. *Dioon califanoi* is easily distinguished from other *Dioon* by its strongly keeled leaf. There is one other known locality for *Dioon califanoi*.

On day four we headed for the *Dioon purpusii* locality, Canada De Cuicatalan in Oaxaca, along 6km of pow-

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Cycad Tour of Mexico

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der dry track lined with thousands of *Neobuxbaumia*. This cycad grows in similar habitat to *califanoi*, scattered along a band of mountain side at 1500m, with the road cutting through the colony. The hillside was more densely covered in thorn and it was necessary to track along narrow goat paths to get to the plants. It's a large cycad, some with trunks of at least 4m. Other plants in the area included impressive stands of *Brahea dulcis*, *Nolina longifolia*, *Dasylrion serratifolium* and *Agave potatorum*. The numbers of *Dioon* were low with very few seedlings and no young or immature plants. There are seven known localities of *Dioon purpusii*.

We continued south, spending the night in the capital Oaxaca, then moving onto a truly spectacular cycad locality. Cerro Gavilan is a rock outcrop standing 220m above the surrounding countryside, near the town of El Camaron. The cycads, *Dioon merolae* "El Camaron," only grow on the lip of the North-West face at an elevation of 1500m. The climb was through oak and pine forest with large boulders and deep leaf litter. The top of the rock was sparsely covered with *Nolina* and *Agave*. The *Dioon* had trunks up to 4m upright and more prostrate, with some hanging down over the edge. There were less than 30 cycads in all, male and female, but again no young plants and only one seedling located at the base of the rock. *Dioon merolae* populations are widespread with seven known localities. They can be identified by their flat fronds with crowded leaflets.

A four hour drive followed to our hotel in Zanatepec on the Pan American highway, a very busy area with numerous military stops. Our next cycad locality, El Rancho, was a short drive away just over the border in Chiapas. Two giant *Dioon merolae* were growing in thin pine forest 30km from the Pacific coast and at an elevation of 830m. The two cycads, a male and a slightly larger female, had numerous trunks emerging from the base, prostrate and upright, measuring up to 5m in length. The base of each plant was charred from fires and a piece of broken trunk lay on the grass nearby. They were growing just below the top of the slope facing in a northerly direction. Several smaller, mature plants were growing in the gully at the bottom of the slope 15 meters away. There were seedlings on the slope but no young plants.

Moving east and further inland into dense topical forest habitat of *Zamia splendens*, we encountered strange lizards, colorful birds and carpets of *Chamaedorea* in the forest. *Zamia splendens* is a small cycad with a subterranean stem and two to four leaves. We searched a part of the forest where they had been previously seen; unfortunately, it proved too elusive for us to find. *Ceratozamia miqueliana* was found further up the valley at Lago Mal Paso, growing in cooler conditions at a higher elevation. This is a small to medium sized cycad with an erect crown of leaves to 1.8m. This locality was on the edge of a remote but expanding village and is under threat. We found three large plants cut down in an area cleared for coffee. Three more plants were located on a steep slope at the edge of the forest.

Ceratozamia miqueliana*, another of the rare cycads in Mexico, here pictured at the Cycad Jungle in Polk County.*

Our overnight stop was in Tuxtla Gutierrez, not far from the Sumidero Canyon, one of the most spectacular geological faults in America. Vertical walls plunge a staggering 1300m to the bottom of the gorge and the Grijalva river. *Ceratozamia robusta* grows on the sides of the canyon in low numbers, and a nearby nursery was selling *robusta* plants for a few pence each. We then drove north-east through forests of *Pinus montezuma*, stands of *Brahea dulcis*, and a village with numerous *Ensete ventricosum*. We spent the night at the Aqua Azul

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Palms in Geneva

Survival?

(Geneva is northeast of Orlando, in Seminole County.—Ed.)

By Mike Merritt

This article is a follow-up to the one prepared for the March issue. Here, I will present data describing the fate of palms damaged in my garden during the prolonged cold spell of the winter of 2000-01. I will try to organize the material concisely and avoid the gardener's temptation to go on and on about this or that plant as the listener's or reader's eyes glaze over. The species discussed will be organized into four groups according to the significant differences in microclimate on my 5 acres: (Area one) high canopied area with four freeze nights, temperatures bottoming at 28-29 dF (degrees Fahrenheit); (Area two) outer, somewhat lower and more open areas, 10 freeze nights, four-night temperatures 24-25 dF; (Area three) still lower open areas, 15 freeze nights, four-night temperatures 21-23 dF; and (Area four) very low area near dry lake with four-night temperatures 19-20 dF. In parentheses after the plant name will be the plant height(s). There will follow a 1-4 sentence description of the plant's fate. Only damaged plants will be discussed. References to plants being "cut back" mean that dead outer material of some palms were cut back until living material near the center was exposed, if present. Then this material could harden off and green up, dry and exposed to the sunlight. Kocide and Daconil were applied in some cases. All plants except those in area four received water from a drip system, important during the rather dry spring.

Area One

Adonidia merrillii (13 plants, all 2-3 ft) – The result of an ill-advised purchase of a $1.50 seed pot some years ago. Not covered, nor expected to survive. Surprise! Four plants are developing small leaves, probably would not be happening if they were large enough to have stems.

Aiphanes minima (4 ft, 3 ft) – Covered, but still completely defoliated. One has grown back, now on third leaf. The other appeared dead, but has now just produced a small green shoot – fate uncertain.

Archontophoenix cunninghamiana (6 ft, 5 ft) – Not covered. Smaller one died. Larger one retained two large green fronds, though the newest one died. When a new spear appeared, it fungused and was pulled out. Now, there is another new spear, but the plant's fate is undecided.

Arenga tremula (4 ft) – Not covered. Lost lower leaves only, growing large new leaf.

Arenga undulatifolia (4 ft) – Covered, all leaves damaged, new spear developing.

Beccariophoenix madagascariensis (4 ft, 3 ft) – Covered with plastic-wrapped fencing. 30-40 percent leaf damage. Plants resumed normal growth in spring, damaged leaves tended to shrivel up gradually.

Bentinckia nicobaricus (8 ft) – What was I doing with one of these in central Florida? But it had survived in place for several years. Unprotected, did not survive this winter.

Carpentaria acuminata (6 ft) – Not covered. Defoliated. Killed by subsequent fungal attack.

Caryota mitis (8 ft, 6 ft, 6 ft, 3 ft, 3 ft, 3 ft, 3 ft) – Not covered, some of the smaller ones were in area 2. Largest one left with an undamaged leaf on main stem and two large undamaged suckers. It is growing new leaves through main stem. Some smaller ones had undamaged suckers. One shows no sign of life. All the others are producing small leaves through both the main stems and suckers. Though surviving, the growth patterns of these plants have been severely affected.

Caryota rumphiana (8 ft, 8 ft) – Not covered. Completely defoliated. Cut back. A green shoot has appeared in one plant base, but has not progressed – fate uncertain.

Chambeyronia macrocarpa (7 ft, 6 ft) – Covered with plastic-wrapped fencing. Looked promising after freezes, one even had a green leaf and a good spear that opened in the spring. But then both plants just seemed to give up. This is consistent with my previous experiences with New Caledonia palms that are damaged by freezes (*Burretiokentia*).

Dictyosperma album, var. rubrum (5 ft, 4 ft) – Not covered, nor expected to survive. They didn't.

Dypsis cereceus (5 ft) – Covered with plastic-wrapped fencing. Outer parts of leaves were shriveled where they made contact with plastic, and the new spear was broken at the base in putting on the cover 7 or 8 times. In spring, there was a substantial shriveling of the outer parts of the remaining leaves. Now, there is a new leaf about 3 ft long. Development continues, but this is a slow-growing plant.

Dypsis decaryii (8 ft, 8 ft, 7 ft) – Not covered. Completely defoliated. Cut back. Two plants are responding with new growth. The third appeared to also, but has now died back.

Dypsis madagascariensis, var. lucubensis – This plant was also covered with plastic-wrapped fencing. Though suffering much leaf damage, much green remained after the freezes. However, the plant appeared to die back suddenly in phases, probably due to fungal attacks, and eventually died.

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Survival?

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Heterospathe elata (5 ft, 5 ft) – Not covered, but planted within 2 ft of brick veneer surface of house on protected side, a college try at giving them a chance. It worked, both are growing new leaves, though not rapidly.
Hyophorbe indica (5 ft) – Not covered. Looked OK after the first freeze. Didn't even remember what was there after the fourth.
Hyophorbe lagenicaulis (4 ft, 3 ft) – Covered with plastic-wrapped fencing. Each plant left with one green leaf and an intact spear. Each plant had the spear open by the end of March, and are at or close to three leaves now, each one larger than the last, continuing a normal growth pattern. Though very easily damaged by cold, a well-established bottle palm has a strong capacity to regenerate.
Kerriodoxa elegans (1.5 ft) – Covered with a heavy cardboard box. Leaves were partly damaged, some only on the tips. Now working on a second larger leaf of the season, growth pattern unaffected.
Licuala grandis (2 ft, 1.5 ft) – Covered. Only the larger one was damaged, pulled the spear in February. Since then, the plant has responded with small, then larger leaves, appears on the way to recovery.
Roystonea regia/elata (4 ft, 3 ft) – Not covered. Smaller one was 2 ft from brick veneer wall and survived undamaged. Larger one appeared to be surviving, then died back in subsequent fungal attacks, then perished.
Veitchia winin. mcdanielsii, joannis (6 ft, 6 ft, 4 ft, 8 ft, 8 ft, 2 ft) – Not covered. *Veitchia*s don't survive serious freezes.
Wallichia distichia (5 ft) – Not covered, completely defoliated. Kept me guessing until June, then put up a fairly small but well-developed leaf. Now working on a second.
Wodyetia bifurcata (8 ft, 6 ft, 4 ft, 3 ft) – Not covered. Although all appeared to have good spears after the freezes, the larger three all appeared to get some internal fungus in the long columnar stems and died. Only the smallest survived, though completely defoliated. It is now working on its third leaf.
Undamaged -- *Arenga caudata* (1.5 ft, covered), *Allagoptera arenaria* (3 ft, uncovered), *Licuala lauterbachii* (1 ft, covered), *Licuala* "elegans" (1 ft, covered), *Arenga engleri* (7 ft, uncovered), *Dypsis bejofo* (1.5 ft, covered), *Syagrus schizophylla* (4 ft, covered), *Dypsis decipiens* (1 ft, covered).

Area Two

Arenga australasica (4 ft) – Not covered. Totally defoliated. A small but healthy-looking leaf has appeared at last, a likely survivor.
Arenga pinnata (1.5 ft) – Covered with cardboard box. Completely defoliated. Began resuming growth with normal-sized leaves immediately after freezes, has three now.
Attalea cohune (5 ft) – Covered. Both large leaves shriveled on the tips. Since the freezes, the old leaves have largely died, and a new large leaf has developed, and another is starting. Good recovery.
Bismarckia nobilis (6 ft, 5 ft, 4 ft, 3 ft) – Blue/silver variety. Not covered. All suffered extensive leaf damage, an unwelcome surprise, with the 5 ft specimen being least damaged. The smallest I took for dead after pulling the spear. But all have grown back, the larger three with several new leaves large enough to continue their natural development. The smallest produced a couple of "little leaves", before producing a larger one.
Burretiokentia hapala (1.5 ft) – Covered w/cardboard box. Never fully recovered from mild freeze in 1999-2000 season. No survival.
Copernicia baileyana (0.75 ft, 0.75 ft) – Both covered. Both nearly defoliated, retaining a little green at base of new leaf. One died and one recovered, the latter now appearing as before the freezes.
Copernicia yarey (0.75 ft) – Uncovered one freeze night. Largely defoliated, except near base. Has grown back.
Dypis ambositrae (5 ft) – Not covered, no survival.
Dypsis leptocheilos (9 ft, 9 ft) – Not covered. Cut back. Both plants produced very small green leaves, then larger ones. Recovering, but will take a mild winter and another growing season to return to what they were.
Dypsis lutescens (8 ft) – Not covered. Located next to south wall of utility building. Largely defoliated, but retained some small green leaves near wall and near center of plant. Has grown back strongly.
Hyophorbe verschaffeltii (6 ft, 4 ft) – Small one covered, both completely defoliated. Both growing back strongly.
Latania lontaroides (5 ft, 4 ft) – Covered w/cardboard boxes, but largely defoliated. Smaller one dead. The larger had some green growth remaining and appeared to be developing a new leaf when it died suddenly, apparently a result of a fungal attack.
Phoenix reclinata hybrid (3 ft, 3 ft) – Not covered. Extensive foliar damage, growing back.
Ravenea rivularis (5 ft, 5 ft, 6 ft, 6 ft) – Not covered. All completely defoliated after first freeze. All began growing back rapidly after last freeze, should be back to last year's stature by end of growing season. The regenerative ability of this species is impressive.
Roystonea regia/elata (6 ft) – Not covered. No survival.
Sabal domingensis (3 ft) – Not covered. An unwelcome surprise was to view the damage to all leaves of this plant, though none were killed. Has produced two-

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Survival?

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large new leaves since the freezes, continues growth cycle.

Sabal mauritiiformis (1.5 ft) – Covered with cardboard box. All leaves damaged and shriveled up by April, but has quickly produced two large new leaves. Continues growth cycle.

Syagrus coronata (6 ft) – Not covered. Completely defoliated and thought dead after spear pulled out. Cut back, then responded with rapid growth of new foliage. Has a long way to go to regain its previous stature.

Syagrus romanzoffiana (8 ft, 8 ft, 7 ft, 7 ft) – Not covered. A real shocker, all were nearly defoliated, and two have died. The remaining two are rapidly producing a mass of new green leaves. In my neighborhood, there are numerous "queen palms", large and small, and no others were damaged.

Undamaged: *Borassus aethiopum* (1 to 4 –yr old seedlings, covered), *Corypha umbraculifera* (1.5 ft, covered), *Phoenix canariensis* (2 ft, unprotected), *Phoenix sylvestris* (1.5 ft, unprotected), *Butia capitata* (2 ft, 2 ft, both unprotected), *Pseudophoenix sargentii*, var. navassana (1.5 ft, covered)), *Chamaerops humilis* (1 ft, uncovered).

Area Three

Coccothrinax borhidiana (0.75 ft) – Covered with cardboard box. Upper leaves all browned. Has produced five new leaves of normal size since the freeze. Very strong regrowth.

Dypsis utilis (3 ft) – Covered. Planted next to a lake like the Marojeyja, but the lake went dry, leaving it in a cold pocket. No survival.

Latania verschaffeltia (5 ft, 5 ft) – Covered. One died, the other is growing back, first with small leaves, now with larger ones.

Marojeyja darianii (0.75 ft) – Very carefully protected in an area where temperatures went as low as 21 dF. Mostly defoliated. Started to grow back in spring, but regrowth has stopped. Survival in doubt.

Thrinax radiata (1.5 ft) – Covered. Retained 1-2 green leaves. Has produced 2 normal-sized leaves since the freeze. The sea grape seedlings growing with it are also growing back.

Area Four

Acoelorraphe wrightii (5 ft) – Not covered. Mostly defoliated, but some smaller inner leaves remained green. Is growing back.

Livistona chinensis (3 ft) – Not covered. Most leaves were partly damaged by 19-20 dF. Has grown new foliage, but slowly.

Livistona saribus (1.5 ft, 1.5 ft) – Not covered. Same fate as chinensis. Both plants began to produce new foliage, but slowly, probably because they were only occasionally watered during the drought. One plant abruptly died for unknown reasons, the other is making progress.

Conclusions

The observations above are interesting as data on the ability of many species of palms to survive cold weather with periodic freezes, although observations are of only one or several individual specimens. However, whether the various species should be recommended for growing in central Florida (by anyone but us crazy people) requires further interpretation of these results. I will offer some conclusions that actually reiterate those offered before by others writing for this journal.

That some species are defoliated by freezing weather does not automatically mandate that they are unsuited for central Florida. After all, many plant species commonly used in the area for landscaping (bananas, elephant ears (alocasias), hibiscus, bougainvillea) defoliate at the drop of a hat, but they regenerate quickly when warmer weather returns. I believe that there are even native weeds that defoliate or die in freezes. But they regenerate quickly from seeds or roots in spring, so the life cycle of the species is not affected.

On the other hand, that some palm species survive and grow back after being damaged by severe cold weather does not necessarily make them suitable for gardens in our region. Where recovery requires more than a single growing season (with a mild intervening winter), the suitability of the species is questionable, and it is unlikely that the species will be given a chance by Mother Nature to fulfill its inherent biological design plan.

The best species for our region are those that simply survive the cold weather undamaged without special protection. A second group of palms may be worth working with if cold weather does not interrupt their development, though some damage might occur in a severe winter. But palms that are set back by the cold, and require more than a season to recover, will probably not reach maturity.

Another point of interest that I have learned is that a palm is not necessarily doomed if its growing spear pulls out. Although this indicates trouble for the plant, likely in the form of a bacterial or fungal attack, many plants recover. I probably have 10-15 plants recovering that initially had a spear leaf pull out. #

Grant Guidelines

CFPACS has been solicited for funding several times in the last three years. There has been no clear policy; the board has discussed each solicitation as it arrived and decided whether or not to give a little money to the person/institution seeking this. The chief beneficiary thus far has been Montgomery Botanical Center.

However, appeals for funding are now coming more frequently than in the past. At the board's request, Neal Yorio, immediate past president of CFPACS, put together a set of criteria governing future grants. Neil's guidelines were generally approved, with some minor additions, at the last board meeting, but have not yet been formally adopted.

Some excerpts on selection criteria:

"Grants of funding will be awarded at the discretion of the board to support specific projects, activities, or purchases that are intended to advance or promote:

a. The advancement of the science or general knowledge of botany as it relates to palms and/or cycads or to the understanding of horticulture of palms and/or cycads;
b. The dissemination of information about palms and/or cycads to the chapter or to the public at large; or
c. Other purposes deemed appropriate at the discretion of the board.

Requirements for solicitors:

a. Written proposal submitted to the board with a complete cost analysis.
b. Conditional upon completion of the project would be (1) provision of a written article for the chapter bulletin, and (2) provision to the chapter of extra plant material (seeds/plants) generated as a result of the funding.

CFPACS funding categories:

a. Straight funding "awards." For example, a $250 award, a $500 award, and a $1,000 award. All or part of a request could be funded by this mechanism
b. Discretionary funding: these awards would be in an amount deemed suitable by the board, based on the proposal. All or part of a request could be funded by this mechanism."

It should be emphasized that most of the past awards have been modest, for we are modestly prosperous rather than rolling in money. Anyone with additional ideas or suggestions on the subject should contact Neil Yorio, whose address is listed on the board officers' page.

The second member of CFPACS in Puerto Rico is Edwin Guzmán-Otero, pictured here with his family. Looks like the vehicle could hold a few palms (as well as kids): good choice, Edwin. Our sole Puerto Rican member has been Francisco Bermúdez.

Cycad Tour of Mexico

(Continued from page 14)

falls, a complex of rapids, cascades, and brilliant turquoise pools, surrounded by tropical vegetation, before heading north to Palenque.

Zamia lacandona grows on the steep slopes behind the Maya ruins in the Lacandona forest at Palenque. Only one was seen high up on the trail: a small cycad with erect arching leaves up to 1.4 meters long. On the road-side north of Palenque, *Zamia loddigesii* was growing amongst tall grass. Easy to spot during the dry season, *Zamia loddigesii* is a small cycad with subterranean stem with one to six leaves on a mature plant. Young plants and seedlings were also present.

From Palenque we had a long fast drive to Acayucan in Veracruz for an overnight stop before continuing on to the next locality east of Tuxtepec, Oaxaca, on the Palmares road. *Dioon spinulosum* occurs at elevations of 100m to 150m in Veracruz and Oaxaca, preferring a warmer and more humid climate than some of its relations. The cycads were on steep limestone islands surrounded by farmland with many more growing on the distant hillside. Two sites were visited. The first was a bare rock cleared of almost any other vegetation possibly by fire. The cycads were in full sun on the top of the rock, the crowns holding only one flush of leaves. The second site was heavily forested and larger on area. The ground was very rocky and steep, with little soil. The *Dioon* were up to 10 meters in height and one of the dominant plants in this locality. They held two to three flushes of leaves and some had immature cones. Seedlings were in abundance, but there were no young plants. Bats were roosting under the leaves of one plant. Also growing among the *Dioon*s are giant *Dioscorea macrostachys*, which look like turtles with vines growing out the top.

From *Dioon spinulosum* in the morning it was a short drive to San Bartolome Ayautla, the type locality for *Dioon rzedowskii* in the afternoon. Described in 1980 and endemic to Oaxaca, this *Dioon* is a large cycad with a trunk up to 5m. The locality was near the town of Jalapa at an elevation of 430m. Permission from the villagers was necessary and a guide accompanied us 200m down the steep canyon. On the way down, plots of land less than a few meters across were being farmed. The *Dioon*s were growing in a spectacular setting in huge numbers, clinging to steep outcrops of limestone, some upright with others draped down over the rocks. Orchids and *Agave* were also in abundance. The river was another 150m below and disappeared through a maze of wooded canyons. This is one of the most impressive populations of *Dioon* and appears to be under no immediate threat. Further up the canyon at a much cooler elevation of 770m, was *Ceratozamia robusta*. These cycads were growing under a canopy of oak. Only a few plants remain amongst the boulders surrounded by farmland. The largest had a trunk of 0.5m and 20 leaves 2m in length.

On the last day and still in the state of Oaxaca, we drove to see a recently described and named cycad by Jeff Chemnick, *Ceratozamia whitelockiana*. It is closely related to *Ceratozamia miqueliana*, but with some notable differences, namely smaller cones, longer petioles and blue-gray new leaves. The locality was a steep wooded slope 70km south of Tuxtepec at an elevation of 550m. This was not the type locality and only one plant was observed.

We took the coast road on the way back to Veracruz to look at *Zamia furfuracea*. The locality for this cycad was 50km southeast of Veracruz on coastal sand dunes. Once widespread and common in this area, it is now quite scarce. Vegetation on the dunes was sparse with thorn scrub, coarse grasses, and stands of *Sabal mexicana*. Walking through the dunes for a mile, we located less than 20 cycads, all small with five or six leaves up to 50cm long, with some new leaves emerging. Cows and goats graze the dunes but the main reason for this cycad's scarcity is over collection.

Any problems encountered during the tour were relatively minor. Despite precautions, all members of the group with the exception of Jeff suffered gastrointestinal discomfort to varying degrees which in most cases lasted a couple of days. The mains water is of questionable quality and even taking a shower is risky. March is in the dry season so mosquitoes were only present in low numbers; however, ticks and sandflies were a nuisance. Some hikes were over rough and very steep terrain, often in the heat of the day, and a certain level of fitness was essential. Military road blocks were numerous, but the delays were short. The police stopped us on a dirt road in a very remote area where they held us for quarter of an hour before eventually letting us proceed. None of the officials spoke English. Generally the locals were helpful and friendly. There are areas where Jeff will not venture despite the call of new cycad localities, as outlaws and drug dealers make it too risky. It is also worth mentioning that some of the localities were potentially dangerous and great care had to be taken, especially when looking at cycads on cliff edges and rock faces. Many of the cycad localities are in remote areas that would take years to find without a guide. Jeff Chemnick is one of only a handful of people that know these localities.

The cycads are truly remarkable plants and to see them in the wild is a real privilege. Most memorable were the large *Dioon* growing on cliff tops and the giant

(Continued on page 20)

Cycad Tour of Mexico

(Continued from page 19)

Dioon merolae in the pine forest. The *Ceratozamia* also made a big impression, being highly ornamental with elegantly arching leaves and glossy leaflets. I've not seen any in cultivation come close to these. It was interesting to note how some species of cycad grow at fairly narrow elevations, and by following the contours through the canyons, Jeff has located new cycad populations.

The cliff top habitats presented intriguing questions as to why the cycads are found just on the ledges, usually with a northerly aspect. Possible reasons could be competition from other plants, climate fluctuations, and human interference. More could be learned of these plants if their age could be accurately determined; unfortunately, up to now there is no scientific method of doing this.

Habitat destruction and poaching are the greatest threats to cycad populations, and although no species has become extinct in recent history, the threat is very real. Generally *Dioon* suffer from poaching and *Ceratozamia* and *Zamia* from habitat destruction. What is also disturbing is the lack of recruitment in some populations. This presents no immediate threat as cycads are such long lived plants; however, it would have been encouraging to have seen some immature plants.

The tour was a resounding success. We saw sixteen species of cycad at over twenty localities and covered nearly 2000 miles without serious incident or injury, traveling through parts of Mexico seldom seen by Europeans. One item desperately needed was a field guide to the plants of Mexico, as on many occasions we were at a loss to put a name to a plant. From the remote mountain villages to the busy cities, Mexico is a country of many contrasts and a delight to tour. The sheer variety of plant habitat is overwhelming, making Mexico a botanist's paradise.

[The article concludes with the notice that a return visit is planned for November, 2001, and suggests that anyone interested contact the author. I have Ian Watt's e-mail address. His postal address in England may be found in the most recent IPS directory. —Editor]

Life Of a Florida Treasure

By Jerold Crawford

It is an ordinary palm - there are thousands upon thousands just in my neighborhood. Every new shopping mall starts off with these trees as part of the landscape. You see them with their trimmed grey trunks and crowns devoid of any foliage. Unfortunately, about one out of four withers and dies from lack of care. Many palm enthusiasts look at them with disdain. One suburb in Miami-Dade County even tried to ban them until they found out that it was the state tree. It is the ubiquitous *Sabal palmetto.*

When my partner Jeff and I moved to Tampa from Iowa in 1992 and bought a house in Carrollwood in the fall, there were no palm trees on the lot at all. The previous owner thought they were messy and didn't like them. Although I was not into palm trees at that point, I thought it was a dumb statement considering this is one of the few places that we could grow them in the country.

I was just beginning to notice that all the palms were different. I would ask people who lived here all their life what type this one and that one was. The standard answer that I got was, "It's a palm tree - are some of them different? I thought they were just palm trees." Ignorance of the local flora didn't play well with me so I started to read up on them and learned to identify them myself.

That first winter I noticed as I was working on a long-

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Cycad Auction at UCF Arboretum

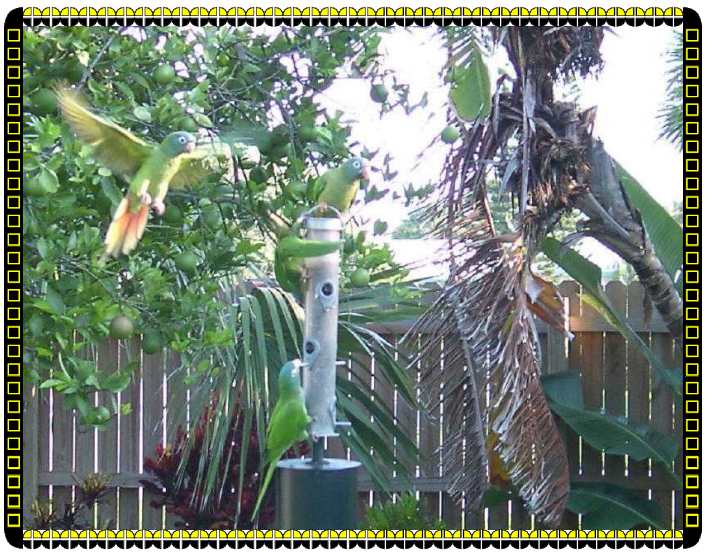
Our last meeting at the University of Central Florida in Orlando consisted of a wonderful presentation by Chris Dalzell of the Durban Botanical Gardens in South Africa, as well as a well-supplied plant sale and an auction of cycads. The auction consisted of several cycad species donated to our chapter by the Montgomery Botanical Center in Miami. All the cycads were *Cycas spp.*, and originated from habitat-collected seed from Thailand, Australia and Guam. Species included *C. tansachana*, *C. clivicola*, *C. clivicola ssp. lutea*, C. *rumphii*, *C. machonochei*, *C. micronesica*, *C. sp.* (similar to *C. tansachana*), and *C. taitungensis.* Many of the species consisted of many rare and hard-to-find plants, so we were especially pleased to distribute these to our members. The auction of these plants resulted in a $311 gain to the chapter treasury. If you missed this opportunity, don't fret; more of the same plants will be available at the PalmFest auction in Tampa on September 29-30.

--Neil Yorio

Below, a majestic Merrill Wilcox hybrid in his Gainesville yard:
Butia X Jubaea X Syagrus

The cycad is Dioon merolae, *a rare species seen by Ian Watt during his "Cycad Tour of Mexico." (The article begins on page 12.) This individual is in the collection of Tom Broome.*

Parrots and palms: Conures, recent and now regular visitors to the birdfeeder in the backyard of Greg and Charlene Palm in Satellite Beach, help maintain the tropical atmosphere.



The Lost Boys—Part 2

(Continued from page 7)

Park the following day.

Day 3 – Laura – Lakefield NP – Princess Charlotte Bay

We woke to the smell of a good old-fashioned bacon and eggs breakfast – the perfect start to the day, although not too good for the cholesterol count! After a bit of a chat with the locals, we packed up and headed north to Lakefield National Park, to seek out more palms in habitat, of course. An hour of bone crunching, dusty rutted road, and we reached the Ranger station at New Laura. We had instructions on where to find some good stands of palms, so carefully noted our progress and kept our eyes peeled, staring at the vegetation growing along the creeks and rivers, hoping to find some 'treasure'. The bush was very dry, the wet season not yet upon us, and being a tropical savannah type of vegetation made it reasonably easy to look for palms. After 20 minutes the cry went out – 'there it is!' **We had** found a solitary *Livistona* growing on a dry creekbed about 300 metres from the road. We slid the car to a stop, grabbed cameras and headed off into the bush. An interesting walk, a bunch of palm desperates trying to make their way through 1.5 metre tall grass, just to see a single palm! We walked to within 100 metres of the palm, mindful that there may be snakes in the long grass. Well, when you can't see more than a metre or two in front of you, the mind certainly starts playing tricks! Some of the more 'urban' members of the group were now a little concerned…earlier we had been told of the hazards – Crocodiles, Taipans, wild Boars. It all seemed very safe near the road, but once off the beaten track you realised that an encounter with any 'nasty' would not be a pleasant experience! **Luckily we** didn't have any incidents, and maybe our stomping around in the long grass scared off any unwanted visitors. We found the lone palm, then with a bit more searching found another mature individual and some juveniles growing nearby. Certainly not a thriving population! This palm was rumoured to be yet another variation of *Livistona* 'Cooktown' or *L.drudei*, but again had some differences and was also geographically isolated by a hundred kilometres or so. Maybe it will turn out to be this species, but for us it was another 'mystery palm'!

We then headed further into the park, stopping at Kennedy Bend, a permanently moist section of the Kennedy River, with large stands of *Corypha utan* growing on its banks. The *Corypha* population was very healthy, with hundreds of tall plants growing along all of the watercourses in the area. A sight to see, and in our eyes, the most dramatic vegetation in the region.

Above, a fine stand of Livistona lanuginosa*, formerly known as* Livistona "Cooktown."

Following a quick break we headed further north to the black soil quagmire of Breeza plains and on to Princess Charlotte Bay. The area was dotted with many stands of *Corypha*, all you had to do was look to the horizon to see the palm crowns standing proud above the treeline. A light drizzle settled in to annoy us and make the track extremely slippery, the black soil turning to grease and reducing our speed to about 10 km/h. We finally reached the water at Princess Charlotte Bay, our northernmost destination, so we stopped for some lunch and a cool drink.

After lunch we set about exploring the area, although the drizzly rain hampered us, and in the end we ran out of time, with several hours of dirt road to cover before we reached Laura again. We did see quite a few large *Corypha* loaded with immature seed, and several in flower. Unfortunately they were some distance away on private property. The species certainly appears to be thriving in the area, and is by no means threatened.

We then packed ourselves up and headed back to Laura, via Musgrave and the Peninsular Development Road, which is like a gravel freeway in comparison to some of the tracks we'd driven on during the day. Arriving back at Laura, we tucked into a nice dinner and reflected on the day's events – the land of the giant *Corypha* will not be forgotten in a long time!

(To be continued. Look for further adventures of The Lost Boys—Part 3 *in the December issue of* The Palmateer.*)*

The Royal Palm That Wouldn't Die

By Jerold Crawford

Living in Carrollwood (northern Tampa), royal palms are few and far between. There are about five of them that I know of up here that manage to hang on through our occasional freezing weather.

I planted a royal palm in my parking (the strip between the street and the sidewalk) in 1993. It had one ratty leaf on it. I planted it at the right time as we went through three winters without a freeze, which helped it get established. It has proven to be a sturdy and rapid grower.

In 1996, we hit 25 degrees here for about 8 hours. The palm defoliated --the honeymoon was over! But it came back and continued to grow. The leaves have been damaged or the palm defoliated every year since then, but it always come back better than ever.

This year, with the unrelenting cold, was different. We spent 48 hours below freezing at my home last winter-- far and away longer cold than I have ever experienced here. My fountain in the back yard had ice that lasted 3 days with only a bit of melting during the day.

I decided to try a new approach to protecting all of my cold-sensitive palms. I wrapped them with a string of vinyl rope lights and then covered it with a blanket for protection. While this worked well for my coconuts and some of my other larger non-crownshaft palms, it did burn the crownshaft palms. Next year, blanket first, then the rope lights.

My royal had a number of burn marks on the crownshaft when the lights got too hot. Of course the leaves were destroyed by the cold, but I hoped that the palm heart was good. All seemed well for several months. I treated with copper fungicide and prayed for warmer weather (like the rest of CFPACS members).

It began to push out a new spear leaf, then another one after that. I thought that it was a bit odd that a new spear leaf was coming out before the first one opened, but I just watched it. I noticed that the smaller spear leaf began to open and wither up while the huge one was not opening. All that could go through my mind was the robot from A Lost in Space@, saying ADanger, Will Robinson@ Something was amiss.

I climbed up on a ladder and tugged at the spear leaves. They, of course, pulled out and were accompanied by a sickeningly-sweet smell that I recognized as a bacterial infection from my position as an Infection

Control Nurse at a hospital. I believe it was a *Pseudomonas* species judging by the smell. There were also maggots inside the crownshaft. I had noticed that the other ones in the neighborhood had all done OK. I figured that I cooked it with the lights.

I decided that I would need to treat this like I would a patient with a life-threatening bacterial infection with that flesh-eating bacteria. You cut until you get to good, viable tissue. So, armed with a chain saw, I started cutting the crownshaft back until I could no longer see or smell bacterial infection. I would up cutting about half of the crownshaft off. It was interesting to see the nascent leaves in the cross section of the crownshaft. There were three that I could see.

I again treated with copper fungicide and waited to see what happened.

Trying to maintain a sense of humor, I put a sign on it saying AIn critical condition with freeze-induced bacterial bud rot Pray for a miracle@. Little did I know that people would actually come lay hands on the tree and pray for it. My neighbor who is a Jehovah's Witness said that he did it several times.

Within 24 hours, I noted that the palm had begun to telescope up the center of the heart. Within a week, it was 6 inches high. Amputated leaves began to unfurl and the center kept growing like nothing had happened.

Three months later, it seems like it is going to make it. The remaining crownshaft has stayed in place. It shed the first leaf base naturally this weekend. The trunk looks normal, albeit, the crownshaft is still truncated. The leaves continue to unfurl and open. I think I can upgrade it from critical to fair. I am still treating the truncated crownshaft with copper fungicide so that water from the rain collecting in it does not induce rot.

The next few months will be important. It needs to have a decent canopy of leaves to replenish its starch reserves, especially if it is going to defoliate again next winter. I have enclosed a picture of what it looked like at the end of June, 2001. I am glad that I took the time to try and save it, even though it may have been easier to just cut it down and get another one. Keep praying with me for a full recovery.

A Visit to Gainesville

By Marilyn and Roger Bachmann

Other than a brief shower (at exactly the wrong moment when the plant sale was beginning) the weather was nice for our north Florida foray. Roger and I welcomed those of you able to make the trip to our palm garden in the morning. We enjoyed showing everyone our collection of those palms which can (and some which won't) survive the climate here. It was fun to show everyone our several young hybrids (*Jubaea/Butia* and *Syagrus/Butia*) and then go on to Merrill Wilcox's palms. There we were able to see mature hybrids and both see and hear about his hybridization procedures. Scaffolding which permitted access to the inflorescences and bags over some of them gave us all a picture of what is involved in hybridizing large palms. Lots of work!

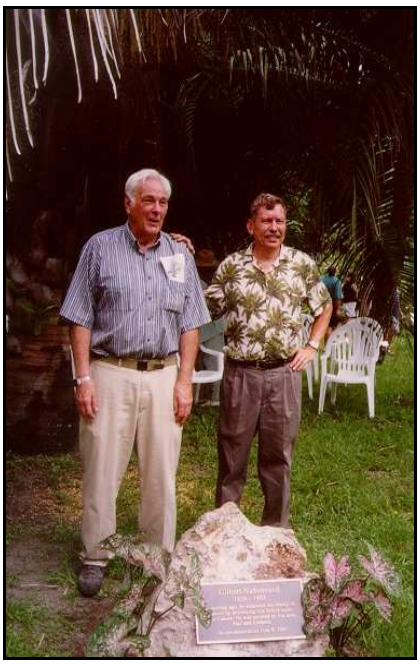
We went home and looked at our young hybrids with a new appreciation of what went into their production. Merrill's visit began with a show slide show which included early pictures of newly-planted palms - many of which we would shortly see on our tour as mature plants. After a tour of the palms, which included many interesting hybrids, the short plant sale (and the rain) began.

Roger and I were pleased to see a number of palms in the sale which are hardy in this area, and took a number home to add to our collection. *(More than just a few—Editor)*

After lunch, the group reassembled at Kanapaha Botanical Garden to tour the palmetum and participate in the installation of a plaque honoring Gilbert Nabonnand for his pioneering work on palms hybridization. Don Goodman, Director of KBG, and Merrill Wilcox, who donated the plaque, talked about Nabonnand, the value of his work, and why it is important to remember those who, while not the big names in the advancement of science, made important contributions. We all appreciated Don's invitation to visit the gardens and his willingness to participate in both our palm tour and the plaque installation ceremony. After our enjoyment of the KBG palms, Merrill invited any who wished to take a short trip to see the palms of the UF campus.

Roger and I enjoyed having CFPACS members come to Gainesville. We were so happy to join with Merrill and Laura Wilcox and Kanapaha Botanical Garden in providing a north central Florida palm tour. While we can't grow as many species as those of you living in warmer areas, we thoroughly enjoy growing those we can and loved sharing our gardens with you.

CFPACS visitors at Kanapaha Botanical Garden in Gainesville.. Below, Merrill Wilcox with Don Goodman (right), Director of Kanapaha Botanical Garden, stand behind the plaque honoring Gilbert Nabonnand.



Left, Merrill Wilcox answers questions on hybridization in his garden. To Merrill's left is our own Faith Bishock. The camera and baseball cap identify Mike Dahme. At right center is Matt Encinosa, with Merrill's son standing behind him.

Bottom, the plant sale—after the shower. Mark Van Antwerp is pointing at something, while John Bishock looks at the camera.. In the left foreground is the Infamous Red Shirt (he thinks it's pink) and pore boy hat of the Editor.

By Tom Broome

What is the best procedure to transplant my King Sago?

Transplanting cycads in general is very easy and fairly risk free as long as you do the proper things. I prefer to remove the all the leaves before I start to move the plant. This makes it easy to work on the plant. If the root system is damaged a great deal when dig up, the leaves will not get as much water pumped into them, and the leaves can collapse and pull the apex apart, which could kill the plant. This doesn't always happen, and the plant can be moved without removing the leaves, but I feel it is the best way, just to make sure. The more leaves there are, and the more the roots are cut will determine how much there is a need for this. If you move the plant during any of the warm months, new leaves are usually produced within a month or two. Even though you can move a cycad any time during the year, the warm months are best.

I try to dig at least 8 to 12 inches away from the trunk in all directions, and at least 12 to 18 inches below the ground, but it never hurts to keep as much of the root system as possible. It is not necessary to treat the roots that have been cut, but if any large roots that are more than an inch or two in diameter are cut, it can't hurt to apply a fungicide or sulfur powder to the cut area, or to seal the cut area with black tree paint. The most important thing to remember when moving a large cycad is to not damage the stem. Any cut area, or gouge caused by wrapping a chain around the stem can kill the plant. Damage may not be obvious at first and can take as long as 3 years for the plant to die. When moving a plant with a stem that exceeds 4 feet, the weight of the stem can cause it to bend, even though it may not be noticeable. It is advisable to use a splint when moving plants with stems that exceed 6 feet in length. By placing two boards on either side of the stem and tying them together, this can keep the stem from bending when being moved.

Once you plant the cycad, you should not over water it, especially if you have removed the leaves. If the plant does not have leaves, it can't respirate, and does not lose very much moisture. This is why I remove the leaves to reduce shock. It is good to water in the plant at first, mainly to fill any air pockets in the soil. After that, only water lightly a couple of times a week until the new leaves are produced. Over watering cycads in general, and certainly when there are damaged roots, is the best way to cause rot that can kill the plant.

It will not hurt to add a time release, or water soluble

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UCF HARVEST FESTIVAL SALE OCT. 26-27

The Harvest Festival Sale of plants to benefit the University of Central Florida Arboretum will take place on Friday, October 26 (9:00-6:00) and Saturday, October 27 (9:00-5:00).

The site is in front of the Biological Sciences building on the Oviedo campus.

Palm and cycad vendors are urged to contact Chuck Grieneisen, chuckfg@mpinet.net A percentage of the vendors' sales goes to the Arboretum, toured by CFPACS members on July 22nd after the cycad presentation by Chris Dalzell of the Durban Botanical Garden.

The better day for selling plants is Friday, when UCF employees throng to the sale when they get out of work. The sale will be advertised in Orlando; the general public usually attends on Saturday.

(Continued from page 26)

fertilizer when planting, but it is not recommended to add a strong granular fertilizer until the damaged roots heal.

Transplanting a cycad is very easy, and I have made it sound more difficult than it really is, but it never hurts to cover any possible problems to ensure a successful transplant.

How well do cycads grow in containers, and which species are the best for growing in containers?

All cycads are easily grown in containers. The cycads that still exist today are the plants that can survive in areas where the faster growing flowering plants can not over take them. Cycads can grow in sand or on top of rocks. They have a secondary root system called coralloid roots that are nitrogen fixing, so they can survive in these areas. This means that they don't need to have an extensive root system in order to survive. Cycads can grow quite well with a smaller, more restricted root system compared to many of the other type of plants in the world. This is why they make an excellent choice for container growing.

There are very large as well as very small cycads in

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South African Cycad Expert Speaks at July UCF Meeting.

By Chuck Grieneisen

Our guest speaker at the July meeting was Chris Dalzell from South Africa. He is the director of Durban Botanic Gardens, a 150-year-old garden covering 37 acres with an extensive palm and cycad collection, the most notable being the original *Encephalartos woodii*s. Their garden is part of the South African Botanical Network (SABONET), a series of botanical gardens in Africa that coordinate their efforts in conservation. More can be read about it at www.sabonet.org/.

Some of the interesting descriptions of their local conditions were that it doesn't get as hot or cold in South Africa as in Florida. Winters are very dry, and they have several feet to several yards of very loose, uncompacted topsoil.

Over time Durban Botanical Garden has moved over 250 large plants, some with 10-15 feet of trunk. They have lost only 1 plant (not a *woodii*), and they have always moved these plants in winter when it is dry and the cycads are dormant.

In the spring when the cycads are flushing out leaves there is a moth that eats the tender leaves. The garden has someone to keep the moths off the plants.

They work extensively with *Stangeria eriopus* and are trying to better determine its range. They are checking for different forms in the different localities as well as its pollination and natural regeneration. They are also collecting 5 plants from each area they investigate and are propagating them.

One of the *Stangeria*'s several threats is its medicinal "value." The native people use it as a purgative (induces vomiting). It was estimated that 5,000 plants were taken out of the wild last year for that purpose. Just as threatening is the loss of habitat due to extensive sugar cane farming.

Durban Botanical Garden also has the 2-3 original plants of *Encephalartos woodii* collected by Medley Woods in 1895. All known plants were males and no seeds have ever been produced, and so Durban Botanic Gardens has always used an aggressive program to propagate them vegetatively, either by cutting branches off (yes, one did have branches) and rooting them , or by digging up the offsets (pups). All *woodii*s in all collections came from one of these methods. They have now moved beyond this into the novel approach of using leaf bases (just one leaf) to produce a new plant. The leaf-base method of propagation involves removing a leaf along with a small part of the "base,"

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Ask Tom

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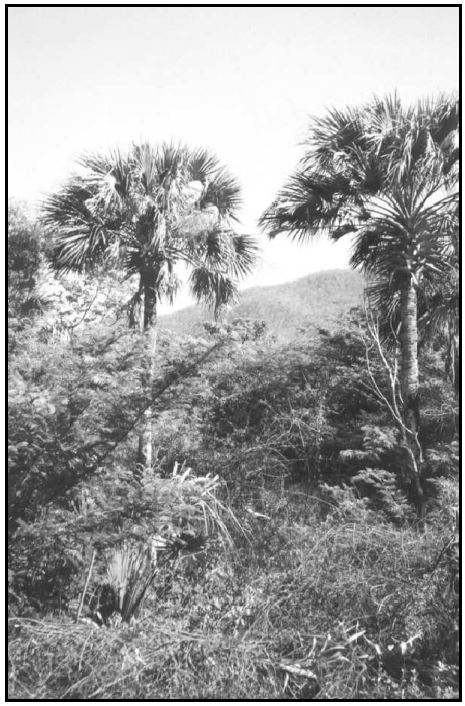
the world. Typically the larger the cycad, the larger the container needs to be. The largest plants are generally the central African *Encephalartos* species, and the *Lepidozamia*s from Australia. The smallest cycads would be most all of the *Zamia*s, *Ceratozamia*s, *Bowenia*s and the *Macrozamia*s that are in the section *Parazamia*. All of these would be the best choices for container growing. There are approximately 80 cycad species just in these four groups and would be too many to list. There are many cycads that are medium size and would also be a very good choice for container growing. For people starting out, I would recommend, *Zamia floridana*, which is our native cycad here in Florida. All of the "pumila types" which are *Zamia*s that look very similar to our native cycad, but have different leaflet forms, are also very good choices. All of these are from the Caribbean area and grow well in our climate. I like the *Bowenia*s for containers, with *B. spectabilis* as my favorite. If you want to grow *Macrozamia*s, *M. communis* would be one of the easiest to grow.



Sabal mexicana*, in coastal Oaxaca, Mexico, spotted by Bill Black. (Looks very much like Florida's own State Tree.) Below,* Brahea dulcis *(?) in central Michoacán*

Cycad Expert

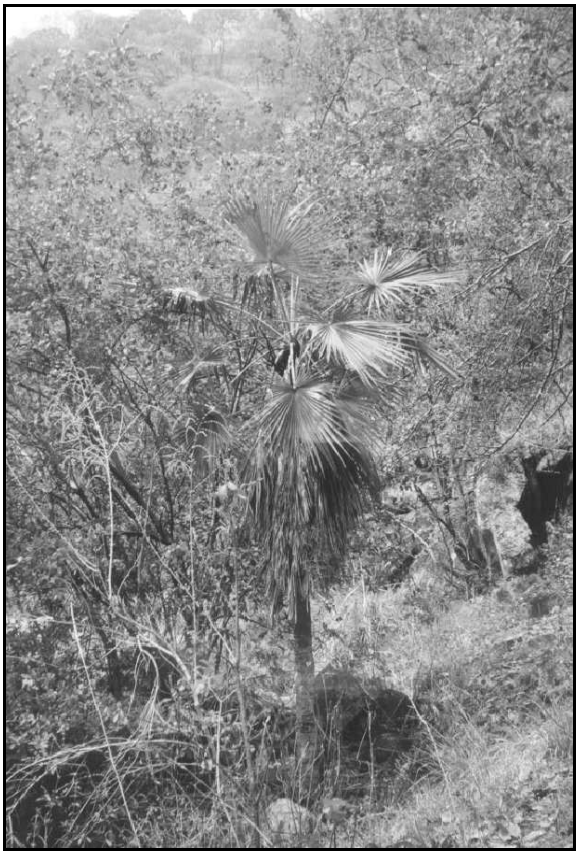
(Continued from page 27)

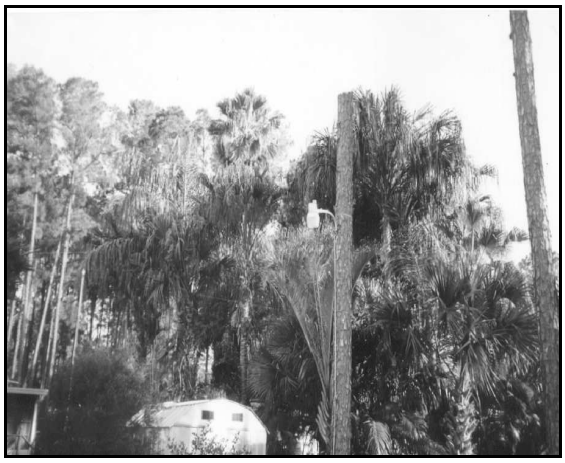
or starch that the leaf is attached to. This base is then treated with rooting hormone and "planted" in river sand. Over time, the treated base grows roots and becomes a new plant. The gardens have recently produced many new plants using this method.

One of *E. woodii*'s main threats is poaching. The Durban Botanical Garden has been the victim of several thefts. Because of these thefts, the garden has increased security around the area, sometimes to almost fortress-like measures.

It is good to know that some of the rarest of plants are in such capable hands.

Above, Sabal mauritiiformis*, growing in habitat, Oaxaca state, Mexico. Bill Black says this is his favorite palm.. Below, left,* Brahea dulcis*, Michoacán, Mexico. Both pictures taken by Bill Black.*





Bill Black's place, not in Mexico, but in St. Cloud—not all that far from the wonders of Disney World. Could anybody tell that a CFPACS member lives here?

Florida Treasure

(Continued from page 20)

neglected flower bed on the north side of my house that there was a volunteer palm seedling with two little leaves poking up. I had made friends with a botanist from USF through the carnivorous plant club and he told me that it was a *Sabal palmetto*, I needed to get rid of it as it was too close to the house.

Jerold Crawford's "Florida Treasure," his rescued Sabal palmetto *in Carrollwood, Tampa.*

Being the kind hearted soul that I am, I just couldn't dig it up and pitch it. Despite assurances from my friend that they don't transplant worth a damn at that age, I decided to dig it up and put it a sunny place in the backyard.

I carefully dug it up and moved it. I made sure I watered it well. It promptly defoliated and "died". I thought "Well, I tried anyway." I guess my friend was right. So, one day when I was mowing the yard, I just mowed over the thing and forgot about it..

Several months later, when I was again mowing the back yard, I noticed this little fan shaped leaf poking out of the ground when I had planted the palm. I realized that it wasn't dead but was very much alive. I called Jeff out to look at it. We were both amazed at its resilience. We bought one of those little wire fences to put around it so we wouldn't damage it by stepping on it or mowing over it.

As the years went by, it continued to grow. I wasn't paying it much attention other than to fertilize it along with my other "prettier" palms. It never needed water nor was damaged by the freezes that wrecked havoc with my other palms.

The size of the trunk has continued to increase and its crown is becoming quite imposing. After we finished off the courtyard in the back, it has provided a great deal of shade. It is very pleasant to sit back there in the shade and listen to the fronds in the wind.

I recently had a party and had my guests comment what a nice palm that it was and they have never seen a palm actually provide shade before.

Because of its size, I have been watching for any signs of flowering. This winter, after the cold snap was over, I noticed that there were new green spikes poking up from the leaf bases of the newer leaves. My baby has grown up!

Now, three months later, I am greeted with the most beautiful spray of flower bracts.

They have since opened and have a delightful aroma about them. I am amazed at the number and variety of insects that are pollinating them. It please me to know that the flowers will provide nectar for the insects and the seeds will feed the birds and other animals.

So many times, *Sabal*s are mohawked and otherwise mangled so that their natural beauty is lost. I know that I have stopped and told tree-trimming crews that they are harming the trees. Unfortunately, they do not seem to care. I have been truly blessed to watch this plant grow up from a seedling to a reproducing adult. I wish more people in Florida took the time to really examine the treasures that are our state tree.

However we may question the sincerity of the people we meet, we always suppose them more truthful with us than with others.

—La Rochefoucauld, Maxim 366

Treasurer's Report

March 10, 2001 to July 22, 2001

INCOME

Seed sales		1,645.06
Membership dues		1,075.00
Donations to CFPACS		0.00
Public sales (Leu, USF, Green Thumb sales)		764.74
Private sales (March 10, June 9 meetings)		221.82
	Total	3,706.62

EXPENSES

Publications (v. 21, no.2)		1,401.50
Computers and software		15.00
Grants		0.00
Miscellaneous		36.38
	Total	1,452.88

INCOME – EXPENSES 2,253.74

Bank balance 03/10/01	15,083.48
Bank balance 07/22/01	17,287.85

Net increase 2,204.37

(Note: Club-budget and bank reporting periods do not exactly coincide.)

ASSETS

Endowment (mutual funds)

10,000.00 (purchase price)
9,456.26 (value at time of purchase)
8,944.93 (current value, close of market 07/20/01)
(5,621.46 Washington, 3,323.47 Putnam)

Office equipment and tent 1,595.00

Computers and software 2,544.41 minus depreciation

--Mike Merritt, Treasurer

Central Florida Palm & Cycad Society service area includes the following counties: Alachua, Brevard, Citrus, DeSoto, Flagler, Hardee, Hernando, Highlands, Hillsborough, Indian River, Lake, Levy, Manatee, Marion, Okeechobee, Orange, Osceola, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Lucie, Sumter, Suwannee, and Volusia.
Please notify the Membership Chair (see directory on p. 35) of any changes in street address, phone number, area code, or e-mail address. The newsletter is sent to the address of record.

Minutes of CFPACS Board Meeting, July 22, at UCF

The board *meeting was called to order at 10:30 at the campus of the University of Central Florida. All board members present except for Ray Hernandez and Mark Van Antwerp.*
No minutes were read because the Secretary, Chuck Grieneisen, forgot them.

The treasurer's report as done by Mike Merritt is as follows. Income for the period of March 10 to July 22 which included seed sales, membership dues, and plant sales totaled $3706.62.
Our expenses which were mostly for publication of *The Palmateer* was $1401.88 for a net increase of $2253.74! One of our underperforming mutual funds was discussed whether to move it to a new fund.
The Palm Fest flyers have been printed.
Liability insurance for the Palmfest in particular was discussed, as well as an annual insurance for the society all year.
An outline for CFPACS grants were preliminarily accepted that was submitted by Neil Yorio.
Our logo designs now are being worked on by Charles Tysklind.
A nominee from the CFPACS to be a Florida. rep to the I.P.S. was discussed. Bernie Peterson is retiring; Faith Bishock was suggested.
Workdays for the UCF gardens and other public gardens was brought up. Forming a committee to do that as well a plant donations for those projects were discussed.
Continued color pages for *The Palmateer* was also brought up. A board of directors calendar of events was also submitted by Neil Yorio.
A funding project for a compendium for *Diseases of Ornamental Palms* was also discussed.
It was approved that a *Cycas tansacha* would be donated to UCF from the auction plants. CFPACS was invited to join The Cycad Society as a chapter by the acting president of The Cycad Society, Tom Broome.

--Chuck Grieneisen, Secretary

Heathcote Botanical Gardens, 210 Savannah Road in Fort Pierce, will hold its 14th Garden Festival on Saturday, November 17, 9 a.m. to 4 p. m., and on Sunday, November 18, 9 a.m. to 3 p.m. Nurseries will offer their plants and garden-related businesses will also be present. Children's activities, food and drink will be available. For additional information and directions, call Heathcote (561) 464-4672.
Any potential palm and cycad vendors should contact Heathcote for details.

Seedbank Report

We started off the second quarter seeds sales with **Lou Thomas** donating the ever popular *Licuala grandis* **$105.00**, a few remaining *Reinhardtia latisecta* **$4.00** and a couple more *Attalea* wood carvings were sold adding another **$10.00.**

Bud Wideman's *Arenga pinnata* managed to put out a few more seeds during its last dying breath- **$15.00**, in addition **Bud** donated 24, 1 year old seedlings of *Allagoptera arenaria,* these sold quickly @ **$3.00** each- **$72.00** for our Chapter's treasury.

Scott Ward's *Livistona drudei* was loaded with seed- **$227.50**; he also donated *Gaussia maya, Ptychosperma elegans,* and *Coccothrinax argentea.* Sum total of these three species **$107.25** for a grand total of **$334.75!**

Montgomery Botanical Center donated much sought after *Cycad* seeds, *Encephlartos gratus, and E. ferox*- **$137.50**

Sam Sweet's *Rhopalostylis sapida* seeds were well received, it didn't seem to matter to us Floridians that these are non-Florida palms- **$148.00,** this included two accessions.

Chris Covington sent in *Hydriastele wendlandiana*- **$43.00**, and *Pseudophoenix sargentii ssp. saonae* var. *navassana*- **$48.00**

Ex-Prez **Neil Yorio** is credited with **$27.50** for some more *Arenga engleri* seed.

John Bishock donated *Ptychosperma microcarpus*: **$60.00** for the Chapter's treasury.

Mike Dahme sent *Archontophoenix "illawara"* seeds from his tree bought as such-**$53.00**; in addition *Ptychosperma elegans*- **$34.00,** and even while vacationing (?) in Puerto Rico, he couldn't keep away from the job and collected *Calyptronoma rivalis*- **$59.00.**

John Kennedy while putting together your current issue of ***The Palmateer***, found the time to harvest and clean over 300 *Allagoptera arenaria* seeds. **John** helps to pollinate these by cupping his hand over the male flowers at the top of the inflorescence, and rubbing the pollen downward over the female flowers. These were very popular. **$152.50.** John, with the help of his son **Matthew,** collected *Copernicia macroglossa.* The demand for these was so great that **Mike Dahme** had to return for more, well over 2000 seeds were requested. Sale total for these in the next report.

Total sales for the quarter- **$1303.25**

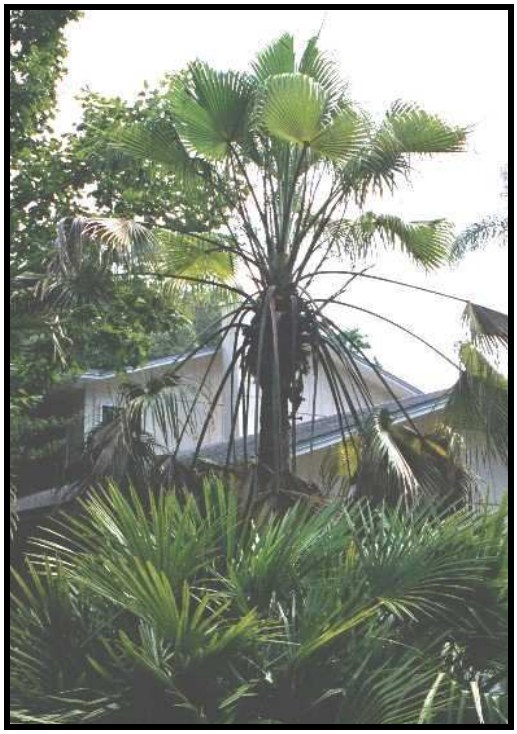
Thanks to everyone who donated seeds or seedlings!

—Charlene Palm

Two dead Metroxylon sp. *(probably* M. sagu*) at USDA in Mayagüez, Puerto Rico. The palm at left was dead in July of last year when Bud Wideman and Jerry Hooper were there, but failed to set viable seed: it hadn't been pollinated. The palm next to it died this year, but is holding much larger fruits that could well be viable. The infructescences are visible above the dead palms. This genus is monocarpic.*

Below, a variegated leaf on Mike Merritt's little Livistona saribus*, seen at the plant sale in the Gainesville meeting.*

Merrill Wilcox is well-known for his work in hybridizing cold-hardy palms. Above, in his Gainesville backyard, is a Butia X Jubaea*, with flowers bagged to collect pollen. Below,* Livistona chinensis*, not as common in North Florida as farther south..*



The USF Fall Plant Festival 2001

It's time again for the Fall sale in Tampa. The University of South Florida, in Tampa is hosting the Fall plant festival on Saturday, October 13th, and Sunday, October 14th. The hours will be 10AM to 4 PM on Saturday, and 10AM to 3 PM on Sunday. Members of the USF Botanical Garden get in early at 9:30 AM.

The Fall *sale last year was one of the best sales we have had for a while. We had new vendors, as well as some of our veterans there. We had extra people to help with palm and cycad questions, and many of our members showed up just to see their friends in the society, and meet new people.*

If there is anyone who would like to be a vendor, please get in touch with me as soon as possible. We need to get nametags for you, so we need to know who is coming out as early as possible, and not at the last minute.

If there is someone new who does not know how to get to the garden, it is near the southwest corner of the USF campus, in Tampa. You can get to the campus on the Fowler exits from either I-275 from the west, or I-75 from the east. From the east, you will drive a few miles before you see the campus. Turn right into the main entrance, and go to the first light. Turn left, the road will end at the entrance to the garden. From the west, get onto Fowler and drive about a mile, and then turn left into the main entrance, and follow the other instructions. There will be people to show you where to park.

The fall sale is good because everyone has had a chance to grow out their plants all season, so this is the time to get larger plants. I would like to invite everyone to come out, especially the people who have not been to this sale. Most of the other societies are there as well, so if you enjoy growing plants such as bromeliads, orchids, ferns, or anything else unusual, you can find it at this sale.

If you need more information on the sale, or would like to be one of our vendors, please contact me, Tom Broome at (863) 984-2739. I hope to see everyone there.

--Tom Broome

From the Editor's Desk

Palm Fest 2001 details are on the front page and just inside this issue. The weekend event promises lots of garden visiting to gander at palms and cycads in the ever-popular Tampa Bay area. I myself look forward to seeing—finally—Dr. Young's garden. However, since I was prevented from going there the last three times the chapter went because of late-breaking crises (two were family, one work), I am wondering what could happen this time. Maybe it is meant that I will never see it, that others will always tell me of its glories.

While transferring the contents of my old, worn-out wallet to a new Christmas-gift wallet early in the year, I found a folded-up typed list of palm species from long ago. From internal evidence, it appears to be from 1984 or 1985. I think I carried the list so that I might be able to say which palms I had in the ground, if anyone asked. I can't recall that anyone ever did, but my memory isn't what it once was (though never exactly photographic). The list is that of the palm cemetery at my house. You *know*, the palms that didn't quite like it and left for the Palmy Pearly Gates.

According to the list, I had two *Arikuryroba schizophylla*. That surely dates the list: how many years has this been *Syagrus schizophylla*? In any case, there are none now. I see that I had a *Heterospathe elata* which, if I recall correctly, lived as long as the tropical fish I had while in college: long enough to be paid for and brought home. There was also a *Nannorhops*. I remember that one, a rosette of two little bifid leaves that remained—for seven years—a rosette of two little bifid leaves. It became very clear that this healthy little rosette had no intention of adding another leaf, let alone height, in my lifetime. My revenge was to allow the wedelia to cover it.

Other casualties on the list include a *Pseudophoenix vinifera* and six *Ravenea robustior*. What could I have been thinking of, planting the former? The latter had to date from the introduction of the Majesty Palm and were, I believe, very small when they met their Maker. Several *Chamaedorea* species also departed this life: *C. elegans*, *C. metallica*, *C. tepejilote*, *C. microspadix*. Several species are not crossed off, not having died (yet): two *Latania lontaroides* that were killed in freezes in the '80s; the big *L. lontaroides* in my back yard now is the third, and successful, attempt that was planted about four years before the Christmas Freeze of 1989.

Better, perhaps, to note the species on the list that are still in the land of the living: *Allagoptera arenaria* (the list only notes one, but there have always been two), *Chamaedorea brachypoda*, *C. seifrizii*, *C. radicalis*, two *Laccospadix australasica*, *Phoenix rupicola*, *Rhapis excelsa*, *Pinanga kuhlii*. The list says there were two *Pinanga*s, but only one remains, never really happy, and with only two feet of trunk after all this time. This is probably the oldest palm I have, ordered in the late '70s from a Hawaiian nursery, before there were children and a house.

* * * * *

I like going to Gainesville, my favorite Florida town, but any meeting there draws a smaller crowd than usual. The approximate center of our membership is the Orlando area and Tampa-St. Pete, neither of which is all that far away from Gainesville (which is a little over 200 miles from my home base in Vero Beach). I admit that Gainesville is a bit of a drive—especially for Indian River County residents—but the palms and cycads that can be grown there form a demonstration lab of cold-hardiness for the rest of us farther south. Alachua County is at the top of our service area (though we have recently annexed Suwannee County, even a little more northerly, to include more closely a new member). Merrill Wilcox's hybrids show the possibilities of palms in a colder place, though some members were probably surprised at the *Livistona*s at Kanapaha Botanical Garden in Gainesville. Marilyn and Roger Bachmann arranged the schedule of events for the March meeting; its smoothness resulted from their efficiency.

* * * * *

As an afterthought to the above, when our group meets too far south—at Montgomery Botanical Center, in Miami—the number of attendees also drops sharply but isn't as obvious since we have usually gone there with Palm Beach Palm & Cycad Society members (who outnumber us). Speaking of that friendly neighbor-chapter, we are invited to the PBPCS annual picnic at Ruth Sallenbach's acreage in Lake Worth on Saturday, September 8th, beginning at 9:30 a.m. It's a spectacular place, of botanical-garden quality, and tour guides take visitors all around, in a more amateur, if more pleasant, way than at Montgomery. If you come, bring a covered dish (there's more food than anyone can think of, but most of it gets eaten) and a folding chair to sit in. In the afternoon, the great feature is a plant auction, not only of palms and cycads, but of all kinds of tropicals. The Palm Beach chapter provides soft drinks, sells t-shirts, memberships, etc., etc. The folks are good people and the place is superb. Anyone who hasn't been there *needs* to go! The only drawback, aside from distance, is the fact that it is **hot** as only

(Continued on page 35)

From the Editor's Desk

Old Florida in the summer-outside-of-the-air-conditioning can be. I've learned to bring water with me. While I'm not sure—at this writing—whether *The Palmateer* will arrive *before* the picnic, I certainly intend that it will. A map and directions are on page 5 of this issue.

* * * * *

As Editor, I am sent the publications of other chapters with which we have a reciprocal exchange. They get *The Palmateer*, we get theirs. At this point, the list includes *The Palm & Cycad News* (Palm Beach), *The Palm Report* (South Florida [Miami]), *Hardy Palm International* (Pacific Northwest), *Bulletin of the Palm Society of South Texas*, *Palm Journal* (Southern California Palm Society), *Chamaerops* (European Palm Society), the newsletter of the Palm & Cycad Societies of Australia, Southern Queensland Group, *The Palm Enthusiast* of the South African Palm Society, and *Et Ceteras*, newsletter of the Louisiana Palm & Cycad Society. The big news from New Orleans is that this group has become the first chapter of The Cycad Society which, heretofore, did not have chapters. Our own chapter will undoubtedly be making the same affiliation in the near future. Aside from several "purists," most of us have a few cycads along with our many palms; some of us have more than a few.

* * * * *

Cold hardiness report, from the front: Vero Beach. . . Last summer I planted, in a little laurel oak and pine hammock in my backyard, a small *Calyptronoma rivalis*, gift of a Noted Puerto Rican Landowner. It was about a foot high (8 inches of trunk) with an 18-inch spread of small adult leaves, very pretty. I put a chicken wire barrier around it, using old *Allagoptera* petioles as stakes. Last January—I can't recall which morning—the temperature dropped to exactly freezing for half an hour. (Temps had hovered in the 40s for several nights previously.) Various palms showed immediate or subsequent damage, but all have recovered fairly quickly, with the exception of a small *Actinorhytis calapparia*, which died immediately. The *Calyptronoma* showed some browning on the leaflets but was mostly green. I realized the other day that there was more brown than green and that, despite the 90+-degree heat and all the welcome rainfall of July, no new leaf had appeared. Uh-oh. The funeral looked imminent. To my surprise, however, a subsequent look indicated that it's not all over, for there seems to be some green pushing up the brown ends of the emerging leaf. The only other fatality of that brush with cold was a volunteer *Passiflora edulis* that, last summer, climbed 40 feet into a laurel oak and bald cypress.

Last February, 10 acres on the south side of Vero Beach burned, cutting off one of the back routes to Fort Pierce and coming very close to a number of houses. It was an impressive fire, with lots of smoke and flames visible for a considerable distance. Driving past last month, I could readily see the signs of the fire: blackened *Sabal palmetto* trunks and scorched clumps of *Serenoa repens*. The canopy of skinny slash pines was badly damaged; many were completely dead. But—this pine flatwoods community is ecologically adapted to periodic burning. A week or so ago, I could see new leaves pushing out of those blackened trunks and the saw palmettos showed little sign of recent fire and were, once again, green.

* * * * *

Chris Dalzell, the South African cycad specialist, spoke to the special July 22nd meeting of CFPACS at the University of Central Florida in Orlando. Fifty people listened for an hour in the Biological Sciences building meeting room. Unlike some experts, Dalzell is articulate, as well as knowledgeable; he also answered questions from the audience. His slides were beautiful, including those of large *Encephalartos woodii* being moved by cranes for replanting elsewhere in Durban Botanical Garden, where he is curator. At least 20 feet tall, they looked almost like some species of *Phoenix*, and made evident why cycads are often confused with palms. Through Dalzell's enthusiasm and expertise, the one or two people in the room with little interest in cycads were able to see their magic through his eyes. As he told a well-wisher afterwards, "I am very fortunate, my passion is also my job." Dalzell's airfare to Florida was underwritten by CFPACS: money well-spent.

• * * * *

If you have an interesting palm or cycad, maybe one not all that common, contribute its seeds to the CFPACS Seedbank. Our sales of seed on the Internet help support our activities, including this newsletter. The number of seed contributors is down, as is our income from this source. What's commonplace in your area may well be what someone else—far away—may be delighted to buy. Membership dues are, shall we say, amazingly modest and don't really cover costs. So, help support an entirely worthy cause: Us.

John Kennedy

We are inviting a few choice, congenial spirits to join us in the praise and enjoyment of palms and cycads. These delightful plants repay the devotion and attention of admirers with their exquisite beauty. Keep Florida beautiful ! by joining the Central Florida Palm & Cycad Society . Plant palms and cycads to offset the encroachment of strip malls and parking lots that threaten our state's natural loveliness. Fill in the coupon below, mail (with check) to the address listed or go to our website: www.cfpacs.com After October 1st , membership dues are applied to the following year (2002). Receive as a bonus, four annual issues of this illuminating publication, The Palmateer, with notices of meetings and palm visitations. The amazingly modest cost is just $10 for one year, or three years for $25.

Please print

Name_____
Street_____
City_____
State,
Zip_____
Email_____

Wish to be added to Seedbank E-mail list? (Circle one) YES NO

Willing to be listed publicly in roster? (Circle one) YES NO

Mail check made out to CFPACS (domestic: $10 one year; $25 three years; foreign: US$15 one year) to:

Membership Chair
4645 Canterbury Drive
Land O'Lakes, FL 34639

Membership also available at website:
www.cfpacs.com

Deadline for material for the December issue of *The Palmateer* is November 5!!

Livistona drudei—*there are two—at Stacey Peacock's place in Zolfo Springs, bigger (30 feet) and more robust in every way than Scott Ward's in Indialantic, blooms frequently but never sets fruit. John Kennedy has a similar palm; all three came from a Fairchild sale in the early '80s.*

The International Palm Society (IPS)
Anyone interested in joining the IPS and receiving the quarterly, illustrated journal, *Palms*, should send a check for $35 (regular membership) or $45 (family membership) to:

International Palm Society
P. O. Box 368
Lawrence, KS 66044

Dues may also be paid online at the IPS website, www.palms.org

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Sabal mexicana, *photographed by Bill Blake in Oaxaca, Mexico.*

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